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MARCH 10, 1951

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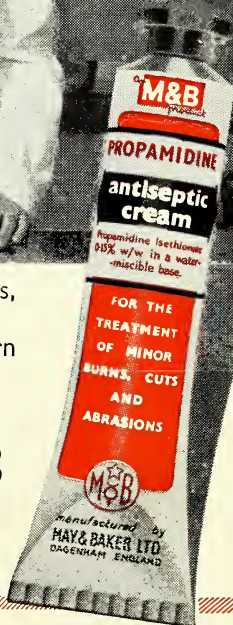
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for RETAILER — WHOLESALE — MANUFACTURER

MARCH 10, 1951

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NEWS OF THE WEEK

Sight-testing Fee Reduced. — The fee for doctors testing sight under the Supplementary Eye Service of the National Health Service was reduced from 25s. to 1/- on February 14.

An Association of Pharmaceutical Committees?—The secretary of the Lindy (Lincs) Pharmaceutical Committee in a letter to the "Executive Council" states that at the January meeting the advantages of having a national association of pharmaceutical committees were discussed and invites the views of committees in other areas. The letter adds "One of the strongest reasons for suggesting the formation of a national association is that there is no national body, completely representative of Pharmaceutical Committees, whose membership consists of contractors, employee pharmacists and hospital pharmacists."

Key Industry Duty Exemptions. — The Treasury has made an Order (S.I., 1951, No. 294) exempting the following from Key Industry Duty for the period March to August 19:—

Acetone (R grade, fermentation and synthetic). Butacaine sulphate (an aminobenzoic ester). Dimethylcyclohexyl phthalate (an alkylcyclohexyl ester). Ethyl α -hydroxy- α -methylbutyrate (an ethyl ester). Guanidine nitrate (a guanidine salt). Hydroquinone. 4-Hydroxy-2-aminopyrimidine. Lithium sulphate, of which the lithium is in the form of a stable isotope either of atomic weight 6 or of atomic weight 7, valued at not less than £1 per gm.

The Treasury has also made an Order (S.I., 1951, No. 293) exempting acetone from additional duty under the Import Duties Act, 1932, for a period ending August 19, 1951. The effect of these Orders is to make all types of acetone chargeable at the 10 per cent. general *ad valorem* duty only from March 2 to August 19.

Import Licensing Changes. — From March 7 a number of new items, including some chemicals, may be imported without restriction from the usual "liberalisation" list of countries. A number of amendments are made from the same date in respect of items already covered by open general licence. Additions to O.G.L. include the following:—(Part A): Arrowroot, prepared; rennet. *Group 3*: Pine oil. *Group*

5: Alginates; aluminium compounds; alums; ammonia, liquid; arsenic compounds; carbons, activated or decolourising; cryolite, synthetic; dipentene; formaldehyde, lead compounds; nitric acid; thiocyanates. Amendments include the following:—*Group 5*: The item "arsenious oxide including white arsenic" is deleted, and is now included under the new item "arsenic compounds." The heading "Disinfectants, insecticides and sheep and cattle dressings" is amended to read "Disinfectants, insecticides, weed killers, and sheep and cattle dressings." The items "lead acetate" and "lead nitrate" are deleted, and are now included under the new item "lead compounds."

Box-making Team's U.S. Visit.—A report on the visit to the United States in 1950 of a productivity team representing the rigid-box and carton industry has been published by the Anglo-American Council on Productivity, 21 Tothill Street, London, S.W.1 (price 2s.). The team found in the United States greater productivity (in some cases by 50-70 per cent.) than in the United Kingdom, for reasons that included: (1) Faster running of machines without fatigue to operators; (2) competition for employment; (3) good plant layout and great attention to detail, particularly in preparing the work; (4) excellent quality of raw material; (5) lower taxation, plentiful food, and an "enlightened attitude" of unions and labour towards production and profits. The proportion of married women employed was high, but their lot was easier than in Britain since they ceased work at 4 p.m. each day yet still had four hours left for shopping.

"Ideal Home" Exhibition.—Among the exhibitors showing new toilet and cosmetic products or packs at the "Daily Mail" Ideal Home Exhibition, Olympia, London, which opened on March 6, are Max Factor Hollywood & London (Sales), Ltd. (new fashion shade Pinki in dry rouge and three new shades in cream rouge); Peter Claridge, Ltd. (miniature packs of Evergreen and other perfumes); R. Demuth, Ltd. (Memento, Saga, Contraband and White Lies perfumes, Spic deodorant); Bourjois, Ltd. (Mais Oui and Evening in Paris perfumes in novelty packs); Droyt Products, Ltd. (figure-shaped soaps including P.C. 49); T. J. Smith & Nephew, Ltd. (Flicks facial cleansing pads); Reckitt & Colman, Ltd. (bath cubes in new packing); Westbrook Lanolin Co.

(Handmaid lanolin foundation cream); Beauty Light Co. (illuminated cosmetic compact to make up in the dark); Derman Products, Ltd. (Vibro-action hair brushes); Swandown Cosmetics (Panchromatic smooth-on make-up); Pal Personnn Blades, Ltd. (Micrometric razor). Navarr Preparations, Ltd., Tokalon, Ltd., Eyelure, Ltd., Evanol, Ltd., B.G.F. (Cosmetics Ltd., Remington Rand, Ltd., and John A. Fransen, Ltd., are also exhibiting in the toilet section. Elsewhere in the exhibition Keen, Robinson & Co., Ltd., display miniature bottles of barley water, and Almag Engineering Co., Ltd., a twenty-eight-pint autoclave fitted with pressure gauge and thermometer.

LOCAL NEWS

Isle of Wight Officers.—At a meeting of the Isle of Wight Branch of the Pharmaceutical Society held on February 1, Mr. A. J. C. Bull, Lilacs, Bullencroft, Ryde, was appointed *Secretary*, and Mr. V. W. Hinkley, 34 Union Street, Ryde, *Treasurer* of the Branch.

Rotherham Prescription Frequency.—The Rotherham Executive Council has examined prescriptions dispensed locally in January 1950 to investigate why prescription frequency in the Council's area has been higher than that for the rest of the country. Of 29,681 scripts examined 19 per cent. were written by doctors outside the area, the highest percentage "foreigners" dispensed by an individual chemist being 29.53 per cent. The results have been submitted to the Minister of Health for examination.

North Lanes Dinner and Dance.—The annual dinner and dance of the Lancaster and Morecambe Branch of the Pharmaceutical Society was held at Morecambe on February 21. Mr. T. Ashley proposed "The Chairman and Branch." Mr. R. V. Harrison (branch chairman) responded welcoming the guests, amongst whom were the mayor and mayoress of Morecambe, the mayor and mayoress of Lancaster, and members from the Kendal and Preston Branches. "Our Guests" was proposed by Mr. W. A. Smith, and the mayor of Lancaster replied. Mr. R. Swaits, Morecambe, was toastmaster.

Southend-on-Sea Annual Dinner.—At the annual dinner and dance of the Southend Branch of the Pharmaceutical Society on February 21, the toast "The

Pharmaceutical Society" was proposed by the mayor of Southend and responded to by Mr. J. F. McNeal (a member of the Society's Council). Mr. McNeal spoke of the man-power shortage in pharmacy and of the lack of recognition of the Society's qualifications in H.M. Forces.

Brighton Annual Dinner.—Speaking at the annual dinner of the Brighton and Hove Branch of the Pharmaceutical Society at Hove on February 21, Mr. A. A. Meldrum (president of the Society) said that the roads by which any profession would advance were improved educational standards and strict interpretation of professional ethics. He paid tribute to the work of Mr. H. B. Mackie in the successful development of the local school. Mr. J. Stuart Padwick (chairman of the Branch), proposing the toast of the Society, mentioned that the Franco British Pharmaceutical Congress was to be held at Brighton in May, with Mr. Donald Hudson as chairman. Proposing the joint toast of "The Branch and the Association," Dr. E. Gordon Watts (principal of the Technical College) said that he was gratified to find that the chief office in each organisation was held by a former student of the college. Improvements to the pharmacy department included the Donald Hudson research laboratory opened during the past year. In response, Mr. Stanley F. George (president of the Association) spoke of the intimate connection between the college and the local pharmacists.

London Students Form Branch.—Some sixty pharmacy students from colleges in the London area met at the headquarters in London of the Pharmaceutical Society, under the auspices of the British Pharmaceutical Students' Association, on February 27, and decided unanimously to form a London Branch of the Association. A temporary committee was elected consisting of Mr. E. N. Ingall, Ph.C. (membership secretary of the Association and chairman of the meeting), *Chairman*; Mr. R. Clinton, Chelsea Polytechnic; Miss Hazel Mellors, School of Pharmacy, University of London; and Miss Baker, South-west Essex Technical College, Walthamstow. An apprentice member was to be elected. Mr. J. J. Relph, Ph.C. (liaison member for London and conference secretary), urged members to attend the five-day conference of the Association which was to commence on April 2. Mr. R. Clinton, welcoming the formation of the Branch, said it would be a means of bringing students from the

London colleges together to their mutual benefit. He invited the Branch to meet the next time at Chelsea Polytechnic. Mr. J. Joffe said that students at Chelsea Polytechnic wanted a nation-wide survey of conditions in schools of pharmacy as they believed that in certain schools (not his own) students and staff were dissatisfied. Mr. Relph said that the suggestion had the support of the Association Executive. In addition, the Association was not satisfied with conditions of apprenticeship—there were still too many "till pushers." During the evening it was announced that the Association was organising a ten-day tour for pharmacy students to visit the biennial conference of the International Pharmaceutical Students' Federation in Copenhagen in August. The cost would be about £23.

SCOTTISH NEWS

Drug Tariff Prices Revision.—A seven-page supplement to the Drug Tariff issued for the National Health Service (Scotland) recently gives prices applicable as from March 1 where these vary from those ruling on February 1.

Scottish Advisory Committee.—At the first meeting of the Scottish Advisory Committee (Whitley Councils for the Health Services (Great Britain)), held in Edinburgh on February 27, Dr. David McCall (resident secretary of the Pharmaceutical Society in Scotland), was appointed *Vice-chairman*. He had previously been appointed chairman of the staff side of the Committee.

Health Service Accounts.—The report of the Comptroller and Auditor General of Accounts for the National Health Service (Scotland) for the year 1949-50, published recently by H.M. Stationery Office (price one shilling), gives the following figures for pharmaceutical payments:—Pharmacists' dispensing fees, £1,052,123; cost of ingredients, £1,904,556; oncost allowance, £634,852; container allowance, £141,141. The figures represent, for the most part, advances on account and do not, therefore, measure the full liability for the year. The Comptroller draws attention to the fact that all water used in dispensing was paid for at the rate of one penny for 6 oz. whether distilled water was used or not, and adds that the continuance of that practice "might well be reconsidered in conjunction with the re-examination of chemists' remuneration."

IRISH NEWS

Contribution to Blood Transfusion Service.—Following an appeal made on February 21 by a representative of the Blood Transfusion Service some eighty members of the staff of May Roberts (Ireland), Ltd., went in relays to the Dublin headquarters of the Service and gave one pint of blood each to the blood bank.

Society of Ireland New Members.—At the February meeting of the Council of the Pharmaceutical Society of Ireland (see *C. & D.*, February 24, p. 236) Mr. Thomas Mulcahy was elected a member of

the Society. The following were nominated for membership: Dr. Olive Murray, 449 Griffith Avenue, Dublin; Mr. Richard C. O'Higgins, c/o Twomey's, Great Denmark Street, Dublin; Mr. John Nugent, 21 Main Street, Longford; Mr. Gerald D. Bagnall, Main Street, Tallaght, co. Dublin; Mr. Robert Semple, Woodbin Estate, Stillorgan, co. Dublin; Miss Una Gleeson, 13 College Green, Dublin; Mr. John F. O'Connor, 36 Park Drive, Cowper Gardens, Dublin; Mr. Joseph Staunton, Carraroe, co. Galway; and Mr. Bernard Feeney, c/o The Medical Hall, Stradbally, Leix.

DRUG TARIFF SPECIFICATIONS

REPRESENTATIONS to the Ministry of Health by the Central Contractors' Committee have resulted in the inclusion in the Drug Tariff of the following items:—

Zinc oxide plaster, B.P.C., 5 yd. x 2 in.; ribbon gauze, B.P.C. (sterile), $\frac{1}{2}$ in. and 1 in. x 6 yd.; white absorbent gauze, B.P.C. (not sterilised), 25 yd. packets; colostomy, suprapubic, and ileostomy appliances: replacement of complete appliances. (The Tariff will include a note that measuring and fitting should be carried out by the contractor who submits the prescription for pricing).

Provision has also been made for tins of tulle dressings, containing more than ten pieces, to be supplied in certain circumstances. Details are set out below.

Tulle Dressings

In so far as the rulings given below conflict with, or extend rulings in the December 1950 Drug Tariff, the Ministry of Health has authorised the rulings given below in place of those in the Drug Tariff.

No strip tulle dressings whatever, medicated or otherwise, may be supplied on E.C.10 forms.

The thirty-six-piece pack of tulle squares, medicated or otherwise, can only be supplied in the following circumstances:—(a) where a thirty-six-piece tin (or tins) is specifically prescribed; or (b) where more than twenty pieces of the following makes are specifically prescribed: Petronet, Santulle, Sulphonet; or (c) where more than eight pieces of Jelonet are ordered. (This is a temporary ruling only until the five-piece and/or ten-piece pack of Jelonet is on the market).

PARAFFIN GAUZE DRESSINGS, B.P.C.:—Unless otherwise specified by the prescriber, one only one-piece pack is to be supplied. The one-piece pack is available in the Jelonet and Petronet brands. (b) On orders for one tin or for three to five pieces the five-piece tin to be supplied. On orders for six to twenty pieces supply the smallest number of five- and/or ten-piece tins to make up the number ordered. The five- and ten-piece packs are available as: Optulle, Nonad Tulle, Petronet, Santulle. In case of Jelonet only, until the five-piece and/or ten-piece pack is avail-

able, supply thirty-six-piece tin on orders for more than eight pieces. (When they are available, treat as already indicated.)

MEDICATED TULLES:—The only medicated tulle included in the Drug Tariff are sulphathiazole tulle and penicillin tulle. Tulle with any other medication should not be supplied. Sulphathiazole tulle: Unless otherwise specified by the prescriber one only one-piece pack should be supplied. The one-piece pack is available as Sulphonet. On orders for one tin the five-piece tin should be supplied. Sulphonet is available and Optulle medicated sulphonamide tulle is expected to be shortly. On orders for three or five pieces supply a five-piece tin; for six to twenty pieces supply the smallest number of five- and/or ten-piece tins to make the number ordered. The ten-piece pack is available as Sulphonet (shortly to be available also as Optulle medicated sulphonamide tulle). On orders for more than twenty pieces supply thirty-six-piece tin available as Sulphonet.

PENICILLIN TULLE:—This is at present available only in ten-piece packs as Nonad and Santulle penicillin tulle.

The prescription should be endorsed to show what pack(s) have been supplied.

DISALLOWED TULLES AND GAUZES, ETC.:—The following are not allowed for payment on E.C.10 forms:—Tulle Gras Lumière, medicated tulle other than those mentioned above, all strip tulle (plaster or medicated), analgesic tulle, Cimlac gauze dressing, Nu-San and Wades flavine wax bandages.

The Council has also established that where a prescriber orders, say, zinc oxide plaster, 1 roll 10 yd. x 2 in., the not dealing with sealed packets at the beginning of Part IV of the Tariff covers the supply of two 5-yd. rolls without reference back to the prescriber being necessary. Payment will be certified against the contractor's endorsement on the prescription form. This ruling also covers absorber gauze, lint, cotton wool and chiropod felt. A comprehensive guide to the Third Schedule is being prepared; copies will be distributed early in March.

TOPICAL REFLECTIONS

Cost of N.H.S.

The following five news items are taken from your issue of March 3. The estimated cost of the National Health Service in England and Wales, in 1951-52, is £55,040,000; in Scotland, in the same period, £43,043,000. Dr. H. Davis (Chief Pharmacist, Ministry of Health) has given, among other examples of increased quantities ordered in N.H.S. prescriptions: lincosin, 6 yd. (formerly 3 yd.); lint, 4 oz. (2 oz.); cotton wool 1 lb. (4 oz.). In Northern Ireland a prescription dispensed is priced in the tariff at £19 18s. 8d.; it was stated that payment would be made, and that the prescriber would be asked to cover from the patient any unusual portion of the medicine that might remain. In answering a question at a meeting at Carlisle, the superintendent of the North England Pricing Bureau said that occasionally a doctor copied an involved proprietary formula containing several unusual ingredients, instead of ordering by proprietary title. (Apparently this was an attempt to promote economy; but would it succeed?) In a disused kiln in North Yorkshire about seventy-five sacks of reusable medicine bottles were found recently. What can panel chemists do about such matters? While merely dispensing what is prescribed, they are threatened with a further reduction of their meagre margin of profit. When we look at figures like those cited in this paragraph, and reflect that within the lifetime of many of us the total expenditure of this country, as shown in the Budget, was less than £200,000,000, we may well sigh for days when taxation was low.

What Sunderland Thinks

The significance of the small majority which Sunderland and South Shields pharmacists voted in favour of an "all-England" organisation for pharmacy (p. 279) could be plainer if the attendance at the meeting referred to had been stated. As it is, those who differ from the resolution carried may suggest that the meeting was not fully representative of the membership. Past efforts in the direction of combining the various pharmaceutical interests in one association have not produced lasting effects. It may, of course, be fairly urged that present circumstances differ materially from those following the first world war and from those of the second. But in each

of the two cases it was pressure of events or impending events that brought representatives of the interests referred to into one body or group; and it was not long before each of the bodies or groups, however useful it may have been, faded out. The main question to be studied on considering the Sunderland resolution seems therefore to be whether a new venture on similar lines would now have a better chance of success. On the principle of one thing at a time, it is desirable, I submit, to see first what the new constitution of the Pharmaceutical Society, when adopted, may bring forth. If, though looking well on paper, it reveals unsuspected weakness in operation, our friends in the North-east will then be in the position of having a stronger case.

Drake's Gout Medicines

Not often has the proprietor of a gout specific obtained so favourable a notice in a high-class publication as did a South London apothecary in "The Gentleman's Magazine" for March 1751. The editor, Sylvanus Urban, prefaced the printing of three testimonials to the remedy of Mr. Drake, who practised in St. Olave Street, Southwark, by an elaborate statement of the stipulation for admitting testimonials to his pages: they had to be "indubitable." The first in praise of Drake (a practitioner I do not remember having known of before) was from William Browning "Esq." of Bermondsey, presumably a person of local importance; the second from Mr. Oliver Acton of the Inner Temple, who was Steward of the Hospital of Bridewell; the third from a Mr. James Allwright of Lambeth. Mr. Browning had been cured of gout in "a few days"; Mr. Acton "speedily"; Mr. Allwright in "eleven or twelve days." The most detailed account of the cure was sent by Mr. Acton; according to his statement, he had also been suffering from hemiplegia. Drake's treatment was by means of pills and draughts, which, Acton believed, did not contain "Mercury, Antimony, or Opium, or anything . . . that can possibly do mischief." Drake evidently knew something about dieting, for he ordered "a very moderate use of meats and wine, but a freedom in milk and puddings and such kind of food." He was described in this tribute as an honest man and a good christian (with a small "c").

Xrayser

NEW COMPANIES

FLEMING'S MEDICAL HALL, LTD. (P.C.). Registered in Dublin. Capital £5,000. Louise M. Fleming, director. 12 Church Street, Athlone, co. Westmeath.

LEONARD SCRIVENER, LTD. (P.C.).—Capital £2,000. To carry on the business of manufacturing, pharmaceutical and general chemists, etc. Leonard Scrivener, director. R.O.: 116 Avenue Parade, London, N.10.

CHURCH STREET DRUG STORES, LTD. (P.C.).—Capital £1,500. To carry on the business of druggists, chemists, etc. Kathleen F. Higgins and Alfred W. Davey, directors. R.O.: Church Street, Calne, Wilts.

B. T. HOLROYD, LTD. (P.C.).—Capital £1,000. To acquire the business of a chemist and druggist, optician, etc., carried on at 41 Promenade, Bridlington. Benjamin T. Holroyd, M.P.S., and Edith Holroyd, directors.

MAXWELLS CHEMIST, LTD. (P.C.).—Capital £6,000. To carry on the business of chemists and druggists, etc. Max F. Steggles, Jean B. Steggles and Peter B. Muckle, directors. R.O.: Crockhamwell Road, Woodley, Berks.

WESTMANCOTT (THERMOMETERS), LTD. (P.C.).—Capital £2,000. To acquire the business carried on at 28 Britton Street, London, E.C.1, and to carry on the business of manufacturers, exporters and importers of and dealers in thermometers, glassware and scientific instruments, etc. Victor C. Westmancott, Harry Gledhill and George S. Gledhill, directors.

Company News

CAMWAL, LTD.—Net profit, before taxation, for the year to September 30, 1950, amounts to £12,853, against £28,014 in the previous year; taxation, £6,055 (£13,000). To container reserve, £1,250 (£2,000); stock depreciation reserve, £89 (£1,737); general reserve, nil (£4,000). Dividend of 5 per cent. on preference shares, £1,360 (same). Proposed ordinary dividend, $7\frac{1}{2}$ per cent., £3,403 (10 per cent., £4,537). Balance carried forward, £11,088 (£10,395).

Compulsory Winding-up

ANGLO-DUTCH PHARMACEUTICAL CO., LTD.—An order for the compulsory winding-up of the company was made by Mr. Justice Wynn-Parry on March 5 in the

Chancery Division on the petition of Commissioners of Customs and Excise. Counsel for the Commissioners said that their claim was for unpaid purchase of £284 due on a judgment and £7 without judgment. There were no notices of opposition or support and the company did not appear. "The company went into voluntary liquidation but could not find a liquidator," added counsel. The Judge said: "We will find one for it."

BUSINESS CHANGES

DAMANCY & Co., LTD., are removing, March 27 to Harrow Works, Coronation Road, Ware, Herts (telephone: Ware 67).

HYMANS (CHEMISTS), LTD., is the new title adopted by Langton & Ratcliffe, Ltd., 63 Bury New Road, Cheetham Hill, Manchester.

LABORATORIES FOR APPLIED BIOLOGY, LTD., have removed to 91 Amhurst Park, London, N.16 (telephone: Stamford Hill 4521).

IMPERIAL CHEMICAL INDUSTRIES, LTD. have promoted Messrs. A. J. Prince and S. Howard to the boards of the Billingham and dyestuffs divisions respectively.

TOM COOPER (CHEMISTS & DRUGGISTS), LTD., is the new title adopted by E. Solomon (Chemists & Druggists), Ltd., Church Street, Basingstoke.

C. J. HEWLETT & SON, LTD., 35 Charlotte Road, London, E.C.2, have appointed Mr. T. Morley-Jones their representative in Northern Ireland and the Irish Republic.

BOOTS, LTD., have opened the following new branches:—73 Burnt Oak Broadway, Edgware, Middlesex; 143 Barking Road, London, E.16; 38 Bingley Road, Saltai, Shipley, Yorks and 71 Bracebridge Drive, Bilborough, Aspley, Nottingham.

THOMAS KERFOOT & Co., LTD., Vale Bardsley, Ashton-under-Lyne, have appointed Mr. G. E. Andrews, 67 Burnham Drive, Worcester Park, Surrey (telephone: Derwent 8541), their representative in South London and adjacent Home Counties.

MR. E. H. HURLSTON, previously superintendent of technical services of Dunlop Rubber Co., Ltd., Speke, has been appointed technical manager of their Manchester factory. He will be succeeded at Speke by Mr. W. A. Clarke, B.Sc., formerly technical manager of precision components.

LEGAL REPORTS

Damages Claim Appeal Dismissed.—The Court of Appeal on March 2, an appeal by Mr. Herbert Joyce, Woodhouse Road, Leytonstone, against a judgment given in the King's Bench Division in July 1950 (see *C. & D.*, 1950.II.103) dismissing his claim for damages against employers, Boots Cash Chemists (Southern), Ltd., was dismissed. For Mr. Joyce it was stated that he was a porter in the shop, and on December 4, 1948, was carrying a box containing medicine bottles when he caught his foot in linoleum and was injured by falling down three stairs. His case was that there was negligence or breach of statutory duty by the defendant company. Mr. Justice Slade held that the shop was not a factory within the meaning of the Factories Act. Counsel contended that it was the duty of employers not to subject their employees to unnecessary risk. The stairs were not safe as was reasonably practicable, because the linoleum could have been taken further back from the top of the stairs. The Lord Chief Justice: You are really asking this court to say that, because the accident happened, therefore the stairs were dangerous.—The court did not call for counsel for the company. Giving judgment, the Lord Chief Justice said that the point was whether it could be said that the staircase was a danger because there was a piece of linoleum tacked down at the top of the stairs to protect the tread. Mr. Justice Slade had come to the conclusion that it could not be said that there had been a breach of duty by the company as occupiers of a factory or at common law. I do not wonder that Mr. Justice Slade held that the presence of the linoleum was not dangerous, because the stairs have been used hundreds of times and during the last 5½ years there has not been an accident or any complaint about them. The plaintiff did what hundreds of people have done—he tripped—but because it is possible that something can happen it does not follow that that state of affairs is a danger. The judge, having heard all the evidence, came to the conclusion that this case could not be called dangerous, and in the evidence I should agree with him.” Lords Justices Singleton and Denning agreed that the appeal failed. During a discussion about costs, Mr. Joyce having received legal aid under the recent Act, Lord Justice Singleton said: “The result

of the appeal is that the State pays the appellant's costs and the company cannot get their costs from anybody.” The Lord Chief Justice: The company have had the privilege of supplying a transcript of the shorthand notes of the case at a cost of over £100.”

Pharmacy Act Fines.—At Wallington, Surrey, recently, Anne Rosenbloom was fined £3 for unlawfully claiming to be a member of the Pharmaceutical Society, and £2 for selling, though not an authorised seller of poisons, a bottle of iunctus containing a poison. She was also ordered to pay £3 3s. costs.—At Romford court recently, Alfred Lawrence was fined £1 for selling Duros (a plating liquid) containing mercury nitrate though not an authorised seller of poisons and for selling it in a container not labelled in the prescribed manner.

Imprisonment for Receiver.—On five charges of receiving stolen property, John Hedley Lawrie, salesman, Camden Town, was at the London Sessions sentenced to eighteen months' imprisonment. He had been sent to the Sessions for sentence by the Clerkenwell magistrate on charges of receiving, among other things, 177 packets of shampoo powders and eighteen doz. bottles of Vaseline hair tonic, the property of the Chesebrough Manufacturing Co., Ltd., Victoria Road, Willesden, London, N.W.10. The prosecution stated that, acting on information received, police officers went to premises in Portpool Lane, Leather Lane, E.C.1, which were occupied by a man named Peek. He also had been convicted on charges of receiving, but his appeal against the conviction was later allowed (*C. & D.*, February 24, p. 230). Lawrie assisted Peek in the shop. When questioned, he said he had bought some of the stuff “on the side.” Some of the stolen articles had been missing from the railway for only twenty-four hours, but the shampoo powders and hair tonic were stolen by a driver and packer (employed by Messrs. Chesebrough) and they had pleaded guilty and were fined by the magistrate. A detective said that Lawrie had had two previous convictions in 1937 and was at present serving a sentence of two months' imprisonment for an offence that occurred after the present charges. The chairman said that eighteen months was the least sentence he could pass for the five charges.

MARRIAGE

SEMPLE—McMAHON. — At the Church of the Three Patrons, Rathgar; Dublin, recently, Robert Semple, Moville, co. Donegal, to Una Assumpta McMahon, M.P.S.I., 10 Kenilworth Square, Rathgar.

DEATHS

FORBES.—On February 18, Mr. James Forbes, M.P.S., 8 Ocklynge Parade, Eastbourne, aged seventy-eight.

JENKINS.—On November 14, Mr. David James Jenkins, M.P.S., 64 Gatley Avenue, West Ewell, Surrey. Mr. Jenkins qualified in 1940.

JONES.—On February 21, Mr. Ernest William Jones, Ph.C., 115 Gloucester Road, London, S.W.7. Mr. Jones qualified as a chemist and druggist in 1897 and as a pharmaceutical chemist in 1898.

JONES. — On January 12, Mr. Jesse Jones, M.P.S., Moor Street, Ormskirk, Lancs. Mr. Jones qualified in 1911.

LANG.—In Montreal, Canada, on February 10, Mr. James Stewart Lang (manager of Burroughs Wellcome & Co., of Canada, until his retirement in 1943), aged seventy-six. A graduate of Toronto University, he joined Burroughs Wellcome in 1911. He was a life member of the Canadian Pharmaceutical Manufacturing Association.

LAYLAND.—On January 30, Mr. John Layland, M.P.S., Flat C, 8 Scarisbrick Street, Southport, Lancs, aged seventy-four.

LISTER.—On January 12, Mr. Charles Lister, M.P.S., 58 Methley Place, Leeds, 7. Mr. Lister qualified in 1911.

MAITLAND.—On January 31, Mr. Claus Henry Maitland, M.P.S., Clovelly, Border Road, Heswall, Ches, aged eighty-two.

RAGG.—At her home at Edmonton, London, N.9, on February 19, Mrs. Ada H. R. Ragg (widow of the late Mr. William Watkins Ragg, M.P.S., and a director of Ragg, Ltd., chemists, Lower Edmonton) aged ninety.

WILKINS.—On February 27, Mr. H. Wilkins (managing director of E. T. Pearson & Co., Ltd., Mitcham, Surrey), aged seventy-six. Mr. Wilkins had been managing director of the company since joining it on its formation in 1912, and was also managing director of Lactagol Ltd., Mitcham, an associated company, since its inception in 1929.

PERSONALITIES

MR. A. D. DAVIDSON (director, M. Roberts (Ireland), Ltd.) has been elected captain of the Castle Golf Club, Rathfarnham, Dublin.

MR. ARTHUR JAMES, M.P.S. Tudor Pharmacy, Felpham, Sussex, who was chairman of the Bognor Regis urban district council in 1950, has decided not to seek re-election to the Council when his term of office expires in May. Since 1946, Mr. James has been chairman of the housing, public health, parks and allotments, highways and foreshore committees.

DR. W. A. TIMMERMAN, lecturer on the World Health Organisation at an evening meeting of the Pharmaceutical Society (see p. 311), is director of the W.H.O. Division of Therapeutic Substances. He trained as a doctor at Leiden University, Holland and before taking up his present position was in turn a Government serologist and bacteriologist in Java, a State serologist in the Netherlands, and director of the (Dutch) National Institute of Public Health, Utrecht. There he was responsible for work on the production of sera and vaccines and the chemical and bacteriological examination of pharmaceutical products; bacteriological diagnosis of infectious diseases; and examination of drinking and swimming water.

PROFESSOR HANS THORNING BAGGE GAARD RASMUSSEN, author of an article on Hans Christian Oersted on p. 309 has a long record of work in international pharmaceutical affairs. One of the origin members of the Technical Commission of Pharmacopœial Experts set up by the Council of the former League of Nations in 1938, he also served as a member of the League's commission of experts for the analysis of opium, etc. He acted also as secretary of the *Commission des Spécialités* under the *Fédération Internationale Pharmaceutique*. Born in Silkeborg, Denmark, in 1888, he took his *Cand. Pharm.* in 1910. From 1916 to 1922 he was assistant lecturer in the organic chemistry department of the University of Copenhagen. In 1922 he took his degree of Doctor of Philosophy, and the same year became professor of chemistry at the Royal Pharmaceutical College, Copenhagen. The following year he was appointed a member of the Danish Pharmacopœia Commission. He is a member of the Expert Committee of the Unification of Pharmacopœias of the World Health Organisation.

THE WEEK IN PARLIAMENT

By a Member of the Press Gallery, House of Commons

MR. C. W. BLACK asked the Minister of Health on March 1 what was the total amount now owing to chemists under the National Health Service Act, and whether the new procedure was resulting in quicker settlements.

MR. A. BLENKINSOP (Parliamentary Secretary to the Ministry of Health): The amount due at January 31, 1950, in respect of prescriptions dispensed to the end of December is estimated at about £3,500,000. The current procedure is accelerating the rate of pricing, but I am afraid that final settlements are not yet made more quickly. They are now about nine months in arrears, but substantial payments on account are, of course, made monthly.

MR. H. W. BUTCHER: Can the Minister tell us of any private business which is nine months behind in checking its accounts and paying them?

MR. BLENKINSOP: I ought to make it clear that, because of the very large amounts that are paid out on account, chemists are not in any worse position than if the accounts were up to date.

COLONEL A. GOMME-DUNCAN: Is not it highly discreditable to the Ministry of Health? What is to happen to those who have recently set up in business as chemists, as opposed to those who have more ample resources behind them? MR. BLENKINSOP: I have already said, we make very substantial payments on account, and that assures that the chemists are not in any great difficulty.

MR. J. MORRISON asked the Minister of Health in a written question on March 1 the total amount outstanding at January 1, 1951, to chemists for drugs supplied on prescriptions over the value of 5s. per prescription, and for how long those amounts had been outstanding. MR. BLENKINSOP replied that the information was not available in that form. He told MR. W. BUTCHER that the number of staff engaged in the pricing of chemists' prescriptions was 1,015.

Dental Goods Supply

MR. C. A. V. CROSLAND asked the Minister of Health on March 1, whether, and on when, he proposed to make an order prohibiting the restrictive practices of exclusive dealing and collective boycott in the supply of dental goods following the report of the Monopolies Commission on that subject. MR. BLENKINSOP said that,

in consultation with the President of the Board of Trade, Mr. Marquand proposed as soon as practicable to lay an order under Section 10 of the Monopolies and Restrictive Practices Act.

Sulphur Shortage

MR. HAROLD WILSON (President of the Board of Trade) told the House of Commons on March 2 that Britain's latest allocation of sulphur meant that, while supplies to essential industries would be maintained at the highest possible level, there would be serious reductions in the general chemical industry, and very serious reductions in industries using sulphur and sulphuric acid. He trusted it would not be necessary to introduce the allocation system. Representations were still being made to the United States Government and the Sulphur Commodity Committee now sitting in Washington. The U.S. Government had been most helpful.

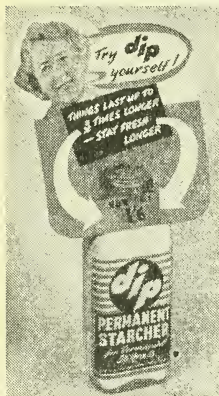
PRESIDENT ON MAN-POWER

THE president of the Pharmaceutical Society (Mr. A. A. Meldrum) was the guest speaker of the East Metropolitan Branch of the Society on February 20. Speaking on "The Man-power Problem in Pharmacy," he said he believed that increasing the number of pharmacists was not the answer, since the new pharmacists would not necessarily go where they were most required. An apparent shortage in hospitals would largely disappear if the remuneration were adequate. In retail, there had been an influx of pharmacists owing to the higher salaries offered. Man-power was not ideally distributed and in some of the industrial areas there were proprietors who had not had a day off for years. There was also a lack of competent teachers. Fewer, larger and better-equipped shops would make for more economical use of man-power, as each shop would be able to absorb two or even three qualified staff and give longer hours of service to the public without longer hours to the individual.

In reply to questions, MR. MELDRUM said that pharmacists were not pulling their weight as citizens, they were too self-contained and not adequately represented in public life. Partnerships of doctors could give all-day surgeries and thus ease evening pressure on dispensing.

TRADE NOTES

Puffer Pack.—Didit insect powder is now available in a one-handed puffer pack from Rodmill Chemical Co., Ltd., 2 Islington Row, Liverpool, 3.



New Pack and Display Aid.—The British Permanent Starch Co., Ltd., Kent House, 87 Regent Street, London, W.1, are marketing DIP permanent starch in a new bottle with display aid as illustrated. A Press advertising campaign is in progress.

Utrecht Fair.—The international Utrecht Industries Fair is being held

from April 3 to 12. It will include a section for medical and pharmaceutical articles.

For Children on Journeys.—Universal Agencies, 158 Stoke Newington Road, London, N.16, have introduced a Traveljoy inflatable chamber for use by children on rail or other journeys. When deflated, the Traveljoy is only $\frac{1}{2}$ in. in thickness. It is supplied "in all the nursery colours."

Pack and Price Change.—Charkaoilin tablets are now presented by the manufacturers, Allen & Hanburys, Ltd., London, E.2, in bottles containing fifty and 100 tablets (in place of 40's and 80's). All orders dispatched on and after March 5 are being charged at the new prices applicable to the altered sizes.

Delays Possible.—Damancy & Co., Ltd., Harrow, point out that the removal of

their offices and works during the Easter holiday (see p. 294) will probably cause some dislocation and delay in production and dispatch. They ask the indulgence of customers.

In Place of Morphine.—May & Baker Ltd., Dagenham, Essex, announce the availability to manufacturers licensed to handle materials subject to the Dangerous Drugs Acts of *dl*-amidone hydrochloride for use as an analgesic in place of morphine.

U.S. Visit.—Mr. Bill Heard (manager of sales and marketing department, Colman, Prentis & Varley, advertising agents, Grosvenor Street, London, W.1), has left for a two-months' visit to the United States. He will make a study of marketing, merchandising and distribution, particularly at the retailer level.

Distribution in the South-west.—From March 1, J. R. Gibbs, Ltd., Marlborough Avenue, Paignton, South Devon, have been appointed wholesale distributors to retail chemists of the products of A. L. Simple & Co., Ltd., Sheffield, 6, in the counties of Devon, Cornwall, Dorset, Somerset, Gloucestershire, and the Scilly Isles.

Hand-treatment Cream.—Coty hand treatment cream, introduced on March 1 by Coty (England), Ltd., 3 Stratford Place, London, W.1, is available in a cartonnage tube in the standard Coty colourings. When used prior to washing it is claimed to be "superfat" the soap. The cream contains Vicotol, a Coty speciality composed of seven ingredients.

Bonus Offers.—On another page W. CARTER & Co., LTD., Coleford, Gloucestershire, give details of display bonus parcels of Ribena blackcurrant juice. The prod-



BEFORE AND AFTER: Knight's Castile soap and wrapper (John Knight, Ltd., Silvertown, London, E.7) before its recent redesign and as it now appears. The tablet is shaped to give a "hand-finished effect."

ow issued in an improved pack with labels.—**DELAVELLE (GREAT BRITAIN)**, 38 Orsman Road, London, N.1, announce on another page a window display bonus offer of Blue Orchid beauty preparations during the spring months. Details of the special terms can be obtained from the company.—The winter offer of Evans throat pastilles has been withdrawn by the makers, **EVANS MEDICAL SUPPLIES, LTD.**, Speke, Liverpool owing to unprecedented demand.

Elective-action Penicillin Compound. A penicillin compound (the hydriodide of the diethylaminoethyl ester of penicillin-G) developed by Glaxo Laboratories, Greenford, has the property of concentrating penicillin action in the lung bronchial tissues; the product is being marketed under the name Estopen. The action of penicillin derivatives with affinity for particular tissues or organs is not new, but the product is believed to be the first practical outcome of investigations. Clinical data so far available show administration of Estopen has given concentrations of penicillin in the lung tissues far in excess of those obtained with large doses of the conventional forms of penicillin. The product is a dry powder suitable buffering and suspending agents, and having a molecular weight of low toxicity, and a low solubility in water. It is issued in single-dose vials of 1,000 units, the usual dose being 1,000 units once or twice daily, increased to 1,000,000 units in severe cases.

PRICE CHANGES

FELLSOL CO., LTD., 206 St. John Street, London, E.C.1, advanced on March 5 the prices of Fellsol.—**CUXSON, GERRARD & CO., LTD.**, Oldbury, Birmingham, state new prices for their sanitary towels and surgical dressings took effect on February 26.—**EVANS MEDICAL SUPPLIES, LTD.**, Speke, Liverpool 19, remind chemists revised prices are in operation for Evon (vitamin B₁₂ Evans), Cascaromat, Clozoin, Histidine (Evans), Pectevan, and injections of emetine hydrochloride (gr. $\frac{1}{2}$, 1, and 1); new prices of the company's surgical dressings took effect on February 26. Messrs. Evans state that, contrary to their recent announcement (see *C. & D.*, January 24, p. 234), the wholesale prices of Midgley's Medisoaps have been increased in line with the increased retail prices.—**GLAXO LABORATORIES, LTD.**,

Greenford, Middlesex, gave effect on March 5 to new prices for Cytamen 20 and Cytamen 50 (boxes of six 1-c.c. ampoules). The 6 c.c. vial of Cytamen 20 and 100-ampoule boxes of Cytamen 20 and Cytamen 50 have been discontinued. The face value of Ostermilk to the public has been increased.—**MAY & BAKER, LTD.**, Dagenham, announce that the prices for 1-gm. ampoules of Thiazamide sodium were increased on March 5.—**NEWBERY & PHILLIPS, LTD.**, announce that in addition to the increase in the price of Cuticura toilet soap which took place on February 5, Cuticura talcum powder, shaving sticks, and shaving-stick refills have also been increased in price.—**PUGH'S VETERINARY MEDICINES, LTD.**, 5 King's Road, Cardiff, increased on March 5 the prices of the company's veterinary products.—**ROCHE PRODUCTS, LTD.**, Welwyn Garden City, Herts, announce revised prices as from March 1 for Protovite drops and tablets, Sedobrol and Sedormid.

Proprietary Articles Trade Association

Alterations to Protected List (Part 1).

Genatosan, Ltd. (agents, *B. C. & B., Ltd.*). Fissan dusting powder: 250 gm., 14s. doz., tax 33 $\frac{1}{3}$ per cent., inclusive retail price 2s.; ichthammol powder: 300 gm., 22s. 6d. doz., tax 33 $\frac{1}{3}$ per cent., i.r.p. 3s. 4 $\frac{1}{2}$ d. Toilet powder, 13s. doz., tax 33 $\frac{1}{3}$ per cent., i.r.p. 2s. 8d. Genamint tablets: 50's, 9s. doz., tax 33 $\frac{1}{3}$ per cent., i.r.p. 1s. 3d. Genozo mouth wash tablets: 20's, 9s. doz., tax 33 $\frac{1}{3}$ per cent., i.r.p. 1s. 3d.; 50's, 20s. doz., tax 33 $\frac{1}{3}$ per cent., i.r.p. 2s. 9d. Germosan cream, 2-oz., 18s. doz., tax 33 $\frac{1}{3}$ per cent., i.r.p. 2s. 9d. Syte eye lotion: 6-oz., 21s. doz., tax 33 $\frac{1}{3}$ per cent., i.r.p. 3s. T.E.D. cough linctus: 2 $\frac{1}{2}$ -oz., 21s. doz., tax 33 $\frac{1}{3}$ per cent., i.r.p. 3s.; 6-oz., 36s. doz., tax 33 $\frac{1}{3}$ per cent., i.r.p. 5s. 6d. Trivikalm: 10's, 16s. doz., tax 33 $\frac{1}{3}$ per cent., i.r.p. 2s. 6d.

Natural Chemicals, Ltd. (agents, *Beechams Pills, Ltd.*). Prices in Channel Islands: Phyllosan tablets, 28s. doz., 3s.; 46s. doz., 5s.; 190s. doz., 20s. Minimum quantities: (a) Combined order, Beecham, Phyllosan and Phosferine lines, £5 value. (b) Separate orders for Beecham, Phyllosan and Phosferine lines, £2 value. Terms: Qualified dealers: 2 $\frac{1}{2}$ per cent. monthly account and 10 per cent. display allowance; unqualified dealers: 2 $\frac{1}{2}$ per cent. monthly account and 5 per cent. for display.

MINISTRY OF HEALTH BULLETIN

THE following abstracts are taken from the twenty-eighth Bulletin to Pharmacists issued by the Ministry of Health.

Influenza Virus

By W. H. Bradley, D.M., M.R.C.P.

(Senior Medical Officer, Ministry of Health).

PRECISE knowledge about the cause of epidemic influenza was first obtained in 1933 when Smith, Andrews and Laidlaw showed that ferrets were susceptible to infection with a specific influenza virus following intra-nasal inoculation. Influenza viruses are divided into two distinct serological types termed influenza A and influenza B.

Strains of influenza A virus do not possess, so far as is known, any antigenic components in common with strains of influenza B virus. There may also be distinctive immunological reactions differentiating strains of A or B virus; and the absence of cross immunity makes the problem of immunisation difficult.

Other important developments in the study of influenza virus were made in 1935, when Smith first successfully grew it on the chorio-allantoic membrane of hen's eggs, and 1940, when Burnet of Australia found that, for direct recovery of certain influenza viruses from human beings, inoculation into the amniotic sac of the developing chick was the most successful.

Viruses multiply with a frightening rapidity and virus A prime has passed through countless generations since it was met in 1949. We are beginning to suspect that its virulence has become enhanced. The big problem in the prevention of influenza by immunisation is to get the right virus under cultivation early enough and in sufficient quantities to be able to produce the vaccine in time to use it against a disease which moves rapidly over vast tracts of the world and which the characteristics of which are unpredictable. The immunity from influenza virus vaccine lasts a few weeks only.

The Drug-testing Scheme

A Survey of the First Year's Work

By C. L. Sargent, Ph.C. (Pharmaceutical Section, Ministry of Health).

THE results of analysis of test prescriptions considered at meetings of Service Committees and of Executive Councils have caused many pharmacists to reflect on the accuracy of their day-to-day dispensing.

The purposes of this paper are to describe the operation of the drug-testing scheme, to present many of the results of year of its work and to compare these with the results obtained by Goldstein on the analysis of similar samples. It will be seen that a high standard has been attained.

Operation of the Scheme

Authority for operating the scheme is given by Regulation 26 of the National Health Service (General Medical and Pharmaceutical Services) Regulations, 1948 which requires each Executive Council in England and Wales to prepare "a scheme for testing the quality and amount of drugs and appliances supplied." The following are important features of the schemes which have been approved by the Ministry of Health:—

(a) *Analysis of drugs and testing of appliances.*—Drugs dispensed under the scheme are sent to one of six analysts appointed by the Minister for different areas of England and Wales. All dressings are tested by the Testing House of the Manchester Chamber of Commerce.

(b) *Materials suitable for testing.*—If representations are received from a local Pharmaceutical Committee that a particular test prescription is unsuitable, the matter is referred to the Minister for advice. In practice, the official analysts, the independent analyst appointed by the National Pharmaceutical Union, and a representative of the Government Chemist have from time to time been consulted about the suitability of certain test prescriptions.

(c) *Method of obtaining a sample.*—An agent of the Executive Council obtains the drug or appliance on a National Health Service prescription form. (The doctor who writes the prescription must not know the name of the chemist to whom the prescription is to be presented. If the sample is a drug, the chemist divides into three approximately equal parts. The agent seals each of the three containers, and returns one to the chemist. One container is immediately sent to the official analyst with a copy of the prescription form, marked only with an identification number and not with the chemist's name. The remaining container is kept in the Council offices for possible use at a later stage of the procedure. Dressings are not divided, but are securely packed and sealed by the agent, and sent by the Council to the Manchester Testing House.

(d) *Examination of certificates of analysis.* In each Executive Council, the chairman and pharmacist member of the Pharmaceutical Service Committee examine the certificates of analysis and decide whether any should be referred for investigation by the full Committee.

(e) *Chemist's Opportunity of challenging official analyst's results.*—When a chemist is told that the report of a test on a drug or preparation supplied by him is being referred to the Pharmaceutical Service Committee, he is given a copy of the certificate of analysis and is told he may have his portion of the sample tested by an independent analyst. If the results of the official and of the independent analysts differ materially, the chemist may, if he wishes, dispute the accuracy of the official analyst's results. In this event, the Executive Council sends its portion of the sample, and copies of certificates of analysis of the other two samples, to the Government Chemist, who is the referee appointed by the Minister.

Examination of the Results

The results which follow have all been taken from certificates of analysis of preparations sampled by the procedure described above.

TABLE I

Substance	Number of Samples	Quantity prescribed (grains or minims)	Average percentage deviation
Ammonium carbonate	71	60	3.94
Ammonium chloride...	97	72	3.57
	101	120	2.15
	106	360	1.86
Chloral hydrate ...	74	120	1.77
Dilute hydrochloric acid ...	135	240	1.59
Iron and ammonium citrate ...	132	720	1.51
Magnesium sulphate	34	1440	2.15
Potassium bicarbonate ...	206	360	2.20
Potassium bromide ...	36	160	1.80
	334	240	2.23
Potassium chlorate ...	64	120	2.07
Potassium citrate ...	207	720	2.49
Potassium iodide ...	63	60	1.61
	140	72	2.21
Sodium bicarbonate...	406	240	2.37
Sodium chloride ...	26	72	2.64
Sodium salicylate ...	53	360	1.88
	118	480	2.00
Solution of ferric chloride ...	37	120	2.37
	39	240	2.34

TABLE II

Substance	Number of Samples	Quantity prescribed (grains)	Average percentage deviation
Ammonium carbonate	14	60	34.53
	20	72	27.69
Potassium bicarbonate ...	14	360	34.13
Potassium bromide ...	27	240	23.19
Potassium citrate ...	20	720	25.19
Sodium bicarbonate...	26	240	29.25

The value used for expressing the results is the average of the percentage deviations from the prescribed quantity. Each set of results from which an average per-

centage deviation has been calculated relates to the same quantity of medicament in the same volume of preparation dispensed.

TABLE III

Substance	Number of Samples	Quantity prescribed (grains)	Average percentage deviation
Ammonium carbonate	85	60	8.98
	117	72	7.69
Potassium bicarbonate ...	220	360	4.23
Potassium bromide ...	361	240	3.80
Potassium citrate ...	227	720	4.49
Sodium bicarbonate...	432	240	3.99

EXTEMPORANEOUSLY DISPENSED LIQUID PREPARATIONS (mainly mixtures)

These results have been expressed in three tables. Table I relates to certificates of analysis *not* referred to Service Committees, and Table II to those which have been referred. Table III shows the effect on the average percentage deviation of combining results from Tables I and II.

DISPENSED VOLUMES OF LIQUID PREPARATIONS

Certificates of analysis of liquid preparations include a statement of the total volume dispensed by the chemist. The Executive Council's agent is required to "mark on the original container the height to which the contents reach." The average percentage deviation of dispensed volumes of liquid preparations has been calculated from some of the first year's certificates, and given in Table IV. (All are taken from certificates *not* referred to Service Committees.)

TABLE IV

Prescribed volume (fluid ounces)	Number of samples	Average percentage deviation from prescribed volume
20	10	2.41
16	82	1.42
12	744	1.48
10	75	1.64
8	536	2.14
6	114	2.01
4	175	3.01
3	25	4.51
2	91	5.26

Goldstein's Work on Tolerances

The series of papers by S. W. Goldstein with which the Ministry of Health results are compared appeared in the *Journal of the American Pharmaceutical Association* (Practical Pharmacy Edition, 1947-48). The papers included results obtained from analysis of prescriptions prepared by

CLASSIFICATION OF PREPARATIONS, DETERMINED TOLERANCES AND ASSIGNED STANDARDS

TABLE V

Group	Solution	No. of samples	Average percentage deviation	Tolerance in \pm %	Assigned standard of tolerance
I (a)	Potassium iodide (100% w/v) 15 mls ...	264	3.81	7.62	\pm 7.5% (\pm 10%)
I (a)	Ammonium chloride (16% to 20%) 90 mls (approx.) ...	59	4.31	8.62	\pm 10.0% (\pm 10%)
I (b)	Acetic acid (10%) 60 mls ...	55	8.32	16.64	\pm 17.5% (\pm 17.5%)
I (b)	Hydrochloric acid (10%) 60 mls ...	251	8.21	16.42	\pm 17.5% (\pm 17.5%)
II (a)	Potassium permanganate (3%) 90 mls ...	70	5.87	11.74	\pm 12.5% (\pm 12.5%)
II (a)	Potassium permanganate (2.5%) 90 mls ...	96	6.28	12.56	\pm 12.5% (\pm 12.5%)
II (b)	Phenol in oil (10%) 30 mls ...	44	10.58	21.16	\pm 22.5% (\pm 22.5%)
III (a)	Potassium permanganate (2.0%) 90 mls ...	48	6.54	13.08	\pm 15.0% (\pm 20%)
III (a)	Potassium permanganate (0.5%) 90 mls ...	64	8.83	17.66	\pm 17.5% (\pm 20%)
III (a)	Silver nitrate (1%) 60 mls ...	302	6.69	13.38	\pm 15.0% (\pm 20%)
III (a)	Protargol (0.5%) 90 mls ...	71	9.96	19.92	\pm 20.0% (\pm 20%)
III (a)	Protargol (1%) 90 mls ...	45	7.26	14.52	\pm 15.0% (\pm 20%)
III (b)	Phenol in oil (2%) 30 mls ...	70	19.14	38.38	\pm 40.0% (\pm 40%)

licensed pharmacists in the drug-stores of Maryland. Goldstein discussed the necessity for a careful study to establish "reasonable" tolerances in extemporaneous pharmaceutical compounding and for their official recognition. He stated that if the controllable and uncontrollable factors within the field of error are assumed to be equally responsible, twice the average deviation should indicate the critical point within which preparations can be made with a "reasonable" degree of accuracy.

Goldstein calculated the average percentage deviations of substances in solutions purchased by a drug inspector from pharmacists in Maryland. From these results, he devised a system of standard tolerances progressing by increments of 2.5 per cent. and based on theoretical tolerances calculated by doubling the average percentage deviation. The nearest lower standard was assigned if the determined tolerance was 0.1 to 0.5 above it, otherwise the next higher standard was used.

For unstandardised substances, that is, those for which the average percentage deviation had not been determined, liquid preparations were divided into three main groups:—*Group I*—total weight of ingredient 5 gm. or more. *Group II*—total weight of ingredient not less than 2 gm. and not more than 4.99 gm. *Group III*—total weight of ingredient 1.99 gm. or less. Each group was subdivided into:—(a) Stable ingredients (b) unstable ingredients (hygroscopic, efflorescent, volatile, etc.). The following tolerances were recommended:—

Group I (a) \pm 10%. (b) \pm 17.5%.
 Group II (a) \pm 12.5%. (b) \pm 22.5%.
 Group III (a) \pm 20%. (b) \pm 40%.

Table V is reproduced from Goldstein's

paper, with the following additions:—(a) the approximate quantities requested; (b) the group tolerance which would have been assigned if the preparation had been unstandardised (shown in brackets after the figures in the last column). The figures shown in Table I have been compared in Table VI with: (a) the theoretical tolerance calculated by Goldstein's method from twice the average percentage deviation; and (b) the group tolerance which would have been assigned if the preparation had been unstandardised.

One paper of Goldstein's series included a study of the precision with which requested volumes of liquid preparations are measured. The average percentage deviation was determined and standard tolerances, progressing by increments of 2.5 per cent., calculated from twice this value. The results are summarised in Table VII.

TABLE VII

DETERMINED DEVIATION OF DISPENSED VOLUME OF LIQUID PREPARATIONS AND CALCULATED TOLERANCES

Number of samples	Requested volume in fl. oz.	Average percentage deviation	2x A.P.D.	Recommended tentative tolerance
33	4	2.59	5.18	\pm 5%
206	3	2.55	5.10	\pm 5%
142	2	2.51	5.02	\pm 5%
55	1	3.82	7.64	\pm 7.5%

For comparison, Table VIII gives the average percentage deviations of 2, 3 and 4-fluid ounce preparations supplied under the drug-testing scheme.

TABLE VIII

Number of samples	Requested volume in fl. oz.	Average percentage deviation
175	4	3.01
25	3	4.51
91	2	5.26

TABLE VI

Substance	Group	No. of samples	Quantity prescribed (grains or minims)	Average % deviation	2x A.P.D.	Assigned tolerance in \pm %	Group tolerance \pm %
Ammonium carbonate ...	II (b)	71	60	3.94	7.88	7.5	22.5
Ammonium chloride ...	II (b)	97	72	3.57	7.14	7.5	22.5
Chloral hydrate ...	I (a)	101	120	2.15	4.30	5.0	10.0
Dilute hydrochloric acid ...	I (a)	106	360	1.86	3.72	5.0	10.0
Iron and ammonium citrate ...	I (a)	74	120	1.77	3.54	5.0	10.0
Magnesium sulphate* ...	I (a)	135	240	1.59	3.18	5.0	10.0
Potassium bicarbonate ...	I (a)	132	720	1.51	3.02	5.0	10.0
Potassium bromide ...	I (a)	34	1440	2.15	4.30	5.0	10.0
Potassium chlorate ...	I (a)	206	360	2.20	4.40	5.0	10.0
Potassium citrate ...	I (a)	36	160	1.80	3.60	5.0	10.0
Potassium iodide ...	I (a)	334	240	2.23	4.46	5.0	10.0
Sodium bicarbonate ...	I (a)	64	120	2.67	5.34	5.0	10.0
Sodium chloride ...	I (a)	207	720	2.49	4.90	5.0	10.0
Sodium salicylate ...	II (a)	63	60	1.61	3.22	5.0	12.5
Solution of ferric chloride ...	II (a)	140	72	2.21	4.42	5.0	12.5
	I (a)	406	240	2.37	4.74	5.0	10.0
	II (a)	26	72	2.64	5.28	5.0	12.5
	I (a)	55	360	1.88	3.76	5.0	10.0
	I (a)	118	480	2.00	4.00	5.0	10.0
	I (a)	37	120	2.37	4.74	5.0	10.0
	I (a)	39	240	2.34	4.68	5.0	10.0

A.P.D.—Average percentage deviation.

*It may be said that magnesium sulphate should receive a "(b)" classification because of its tendency to effloresce in warm, dry air. The results show that "(a)" is more appropriate.

Travel Sickness

H. E. Holling, V.R.D., M.B., M.Sc.,
R.C.P. (Scientific Staff, Medical Research Council, Guy's Hospital, London).

TRAVEL sickness had been thought to originate in the viscera, but it is now agreed that it results from disturbances set up in the internal ear. This theory receives support from the fact that bilateral labyrinthectomy abolishes motion sickness in dogs which had previously been susceptible. The utricular maculae and their attached otoliths are thought to be the organs responsible for originating travel sickness.

Prophylactic Treatment

Seldom can anything be done to reduce the motions that cause travel sickness. Nevertheless, the sufferer should endeavour to obtain a front seat in an aeroplane or motor car, and a cabin amidships in a steamer. On board ship the patient should be encouraged to accustom himself to the ship's motion by walking on deck.

It is general naval experience that the worst manifestations of seasickness are fewer if the patient's mind can be diverted to other matters. On the other hand seasickness can occur even though one's thoughts are entirely concerned with other matters.

The treatment of travel sickness by drugs remains empirical. In practice, any form

of treatment may meet with some measure of success because it is aided by the temporary nature of the illness and by the likelihood that the sea will sooner or later become calm. At the time of the testing of a remedy there are always at least three variables: (1) the susceptibility of the subjects; (2) the severity of the conditions; and (3) the efficacy of the drug.

In 1949, independent reports in this country and in the United States of America told of the effectiveness of antihistamine drugs in the prevention and treatment of travel sickness. In America the effect on travel sickness of Dramamine (β -dimethylaminoethyl benzohydril ether 8-chlorotheophyllinate) was discovered while it was being tested as a remedy for urticaria and hay fever. A patient who was otherwise always sick in a tram reported that she was never sick when she was taking Dramamine.

In air sickness no significant difference has been found between the effects of Dramamine, Benadryl, and hyoscine. A combination of Benadryl and hyoscine has been found to give better protection than any of the drugs given singly.

Of the remedies available there is much to be said for the following régime: Before travelling the patient is given 0.6 mgm. hyoscine with 50 mgm. Benadryl. The dose may be repeated in about six hours.

For children the dose is halved.

COMING EVENTS

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of the week of insertion.

Sunday, March 11

CORNWALL PHARMACEUTICAL COMMITTEE, St. John Ambulance Headquarters, City Road, Truro, at 2.30 p.m. Miss C. E. Mozley-Stark (Pharmaceutical Department, Ministry of Health) on "National Health Service from the Ministry of Health Viewpoint."

Monday, March 12

BIOLOGICAL METHODS GROUP, SOCIETY OF PUBLIC ANALYSTS AND OTHER ANALYTICAL CHEMISTS, Chemical Society's room, Burlington House, Piccadilly, London, W.1, at 6.30 p.m. Papers on "The Evaluation of Drugs in Man."

DARTFORD BRANCH, NATIONAL PHARMACEUTICAL UNION, Smith's Arms, Dartford, at 8 p.m. Mr. H. Noble (secretary, N.P.U.) on "Your N.H.S. Problems."

ISLE OF THANET BRANCH, PHARMACEUTICAL SOCIETY, Lancaster Hotel, Western Esplanade, Broadstairs, at 8 p.m. Dr. R. Hodgkinson (Parke, Davis & Co.) on "Chloromycetin" and film.

SOUTH SHIELDS PHARMACISTS' ASSOCIATION, Dorset Café, Ocean Road, South Shields, at 7.45 p.m. Dinner and social evening.

Tuesday, March 13

CHADWICK PUBLIC LECTURE, Royal Sanitary Institute, 90 Buckingham Palace Road, London, S.W.1, at 2.30 p.m. Mr. G. V. B. Herford (director, Pest Infestation Laboratory) on "Insect Infestation of Stored Foodstuffs."

HOUNSLOW BRANCH, PHARMACEUTICAL SOCIETY, Sun Hotel, Hanworth Road, Hounslow, Middlesex, at 8 p.m. Films: "Insulin" and "The Preparation of Diphtheria Antitoxin and Prophylactics" and address by Dr. D. Findlay (Burroughs, Wellcome & Co.).

NORTH LONDON PHARMACEUTICAL ASSOCIATION and NORTH METROPOLITAN BRANCH, PHARMACEUTICAL SOCIETY, Beales Restaurant, Holloway Road, London, N.7, at 7.45 p.m. Dr. J. A. O'Connor on "Some Practical Aspects of Dietetics."

PRESTON PHARMACISTS' ASSOCIATION, Bull and Royal Hotel, Preston, at 7.45 p.m. Discussion.

SLOUGH BRANCH, PHARMACEUTICAL SOCIETY, King Edward VII. Hospital, Windsor, at 8 p.m. Dr. R. Hodgkinson (medical department, Parke, Davis & Co.) on "Chloromycetin—the First Synthetic Antibiotic."

SOUTH-EASTERN [LONDON] ASSOCIATIONS and SOUTH-EAST METROPOLITAN BRANCH, PHARMACEUTICAL SOCIETY, Grove Tavern, 26 Camberwell Grove, Camberwell, London, S.E.5, at 7.30 p.m. Mr. A. R. G. Chamines (manager, Ciba Laboratories, Ltd.) on "Recent Developments in the Hormone Field, with Particular Reference to Cortisone and ACTH" and film.

Wednesday, March 14

BIRMINGHAM PHARMACEUTICAL ASSOCIATION and BRANCH, Botanical Gardens, Edgbaston, Birmingham, at 6.30 for 7 p.m. Annual dinner and dance.

CROYDON PHARMACISTS' ASSOCIATION and BRANCH, Café Royal, North End, Croydon, at 6.30 for 7 p.m. Annual dinner and dance.

DURHAM COUNTY BRANCH, PHARMACEUTICAL SOCIETY, Royal County Hotel, Old Elvet, Durham City, at 6.45 for 7.15 p.m. Annual dinner.

EDINBURGH AND SOUTH-EASTERN SCOTTISH BRANCH, PHARMACEUTICAL SOCIETY, Maxwell Hotel, Bridge Street, Galashiels, at 7.30 p.m. Mr. G. Perrie on "New Types of Medication."

Thursday, March 15

PORTSMOUTH BRANCH, PHARMACEUTICAL SOCIETY, Solent Hotel, South Parade, Southsea, at 7.30 p.m. Films: "Birth of a Drug" and "Industrial Dermatitis."

ROMFORD BRANCH, PHARMACEUTICAL SOCIETY, Victoria of May & Baker, Ltd., Dagenham, at 7.30 p.m. Works visit, Railway Hotel, Dagenham at 7 p.m. Film show.

Friday, March 16

HULL CHEMISTS' ASSOCIATION and BRANCH, Imperial Hotel, Hull, at 8 p.m. Address by Mr. H. Noble (secretary, N.P.U.).

SOCIETY OF PUBLIC ANALYSTS AND OTHER ANALYTICAL CHEMISTS, Hall of Society of Apothecaries, Black Friars Lane, London, E.C.4, at 7 for 7.30 p.m. Biennial dinner.

JUNIOR BRANCH, MANCHESTER PHARMACEUTICAL ASSOCIATION, is postponing its visit to Evans Biological Institute to April 18 (from April 11).

PRODUCTION REPORT ON DISINFECTANTS

A CENSUS of Production preliminary report (No. 129) of the fertiliser, disinfectant, insecticide and allied trades has been published by the Board of Trade. The report relates to "establishments engaged wholly or mainly in the manufacture of artificial manures, fertilisers, insecticides, sheep and cattle dips and weed killers, and which employed more than ten persons on the average during the year, including those in Government establishments in 1948. About 98 per cent. of the total net output is covered by the returns. Establishments in Northern Ireland are excluded in 1948. Owing to risk of disclosure of information relating to individual firms, separate particulars of the output in Northern Ireland were not published in 1935. The following table gives a summary of the report. Further particulars are given in the "Board of Trade Journal," February 24.

	1918 (a)	1937 (b)	1935
Average number of persons employed ...	14,909	6,979	6,571
Number of establishments ...	169	—	15
	£'0 0	£'000	£'000
Value of gross output ...	30,313	6,132	5,361
Cost of materials, fuel and electricity used ...	20,743	3,807	3,221
Amount paid for work given out ...	164	1	—
Amount payable in respect of levies ...	1,207	—	—
Net output ...	10,511	2,324	2,140
Wages and salaries ...	4,348	—	—
Net output per person ...	705	333	325

(a) Great Britain only. (b) United Kingdom.



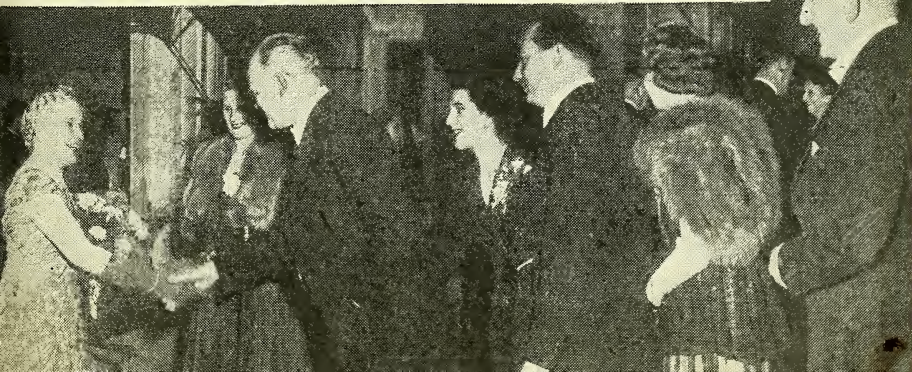
LONDON CHEMIST GOLFERS' DINNER

THE annual dinner and presentation of prizes of the London Chemists' Golfing Society, held in London on March 1, was a palatable mixture of *bonhomie* and tooth efficiency that one has come to expect of that sociable organisation under efficient coursemanship of Messrs. M. Ballantyne and G. T. Morson. The president (Mr. F. G. Wells) responded from his chair to the only toast of the evening: "The London Chemists' Golfing Society," proposed by Mr. Hugh N. Linstead, B.E., M.P., who in an easy bantering style tilted impartially at golfers and the Ministry of Health. Mr. Marquand, he said, had come in at the right time to give the Health Service a new start—to ban it away from the bottle of medicine and on to the golf course. A ready-made health centre existed in most well-arranged golf clubs, and the idea if pursued might result in some curious prescriptions, such as "18 rounds b.i.d.a.c."; "1 putter p.d.u. (utendus, -a, or -um according to the sex of the putter)" and "1 spare ball s.s. sumend."

After going on to hint that there were present too many organised bodies of pharmacy, Mr. Linstead suggested that

the social organisations counted perhaps for more than the others. He concluded with a tribute to "Freddy" Wells, the outgoing president and for many years a member of the Society's Council. Trophies won during the year were presented to the victors by Mr. and Mrs. Wells as follows:—*British & Colonial cup*: E. G. Nice; *Burgoyne cup*: Gordon Smith; *Captain's prize*: T. M. Hunnings; *Arthur H. Cox prize*: J. A. Mackenzie; *4711 prize*: F. G. Wells; *D. & W. Gibbs prize*: R. Carter; *Hepburn shield and Sanger and Yardley cups*: A. H. Newcombe; *Jubilee vase and Yeast-Vite trophy*: D. Carter; *Kerfoot trophy*: H. R. Nightingale; *Leichner cup*: G. H. Hankinson; *Mentholatum prize*: G. T. Morson; *Morny prize*: W. G. Carter; *President's prize*: A. J. Campbell; *Professor Flint cup*: A. C. Arnold; *Harker Stagg prize*: J. Deas; *Thomson cup*: R. C. W. Poole. A programme of entertainment was provided by Mr. Graham Adams and the band; and the evening concluded with dancing.

At head of page: Messrs. H. R. Nightingale (captain, 1950), W. M. Ballantyne (secretary) and G. T. Morson; Mr. and Mrs. H. Noble; Mr. and Mrs. H. D. R. Matthews and Mr. R. L. Taylor. Below: Mr. F. G. Wells (president) and Mrs. Wells, Mrs. and Mr. J. H. Wood, Mrs. and Mr. J. C. Cooper, and Mrs. and Mr. F. C. Wilson.



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other Chemists' Societies in the Empire.

L. CLV MARCH 10, 1951 No. 3707

Disease Stimulation by Antibiotics

THE undesired bacteria-stimulating effect of antibacterial drugs was stressed by Professor L. P. Garrod (bacteriologist of St. Bartholomew's Hospital and professor of bacteriology, London University) in a recently given Kettle memorial lecture, 1950 ("British Medical Journal," February 3, pp. 205-10). Professor Garrod claims that the effect is commoner than is generally believed, and little known. Many common disinfectants, if present in traces, have been shown to cause several workers to stimulate the growth of bacteria, and the lecturer asks whether the law concerning bacteria formulated by Schultz in 1888 (that "poisons are stimulants in small doses") applies to chemotherapeutic drugs. He cites a number of reports on observations and *in vivo* and *in vitro* experiments tending to show that, under certain conditions at least, the law does hold. For example, there is clinical evidence that penicillin can stimulate the growth of bacteria. During treatment, resistant bacteria appear where no bacteria existed before, an occurrence especially liable to happen in the urinary tract during the excretion of penicillin given for disease elsewhere. With sulphonamides the incidences are fewer but prophylaxis with phadiazine at a United States naval training centre was followed by an increase in resistant hæmolytic streptococci, and typhoid fever and other infections became more common in the treated than in the untreated men. Experimental subcurative doses of penicillin have increased the mor-

talidity of mice from *Salmonella typhi* infections, while the drug has also increased the mortality of chick embryos inoculated with *Candida albicans*.

In vitro, low concentrations of penicillin and streptomycin have accelerated the growth of, among other organisms, staphylococci and streptococci. Certain workers have reported that the maximum enhancement of growth was produced by about one-fifth the amount of penicillin required to inhibit growth. Garrod himself found that the growth of both sensitive and resistant organisms was accelerated by an appropriate concentration of penicillin. Oldness of cultures, paucity of medium, and incubation temperatures below 37° C.—factors that were normally unfavourable to growth—favoured acceleration. Two of the factors provide a hint of the reason previously inactive bacteria become active in the body. The lecturer had formed the impression that penicillin might stimulate the growth of the tubercle bacillus which is highly resistant to penicillin and forms penicillinase, and gave a warning that if penicillin were used in a patient who incidentally had tuberculosis a watch should be kept for possible effects on that disease. These problems are no doubt being investigated further.

Improved Tariff Specifications

THE changes in the Drug Tariff (p. 292) follow fairly quickly on those announced in December 1950. Some headway has at least been made in indicating what tulle dressings and plasters the chemist may supply on E.C.10 forms. The announcement that a comprehensive guide is being prepared by the National Pharmaceutical Union and will be distributed early this month will be welcomed by contractors. Hitherto 2-in. zinc oxide plaster, B.P.C., could only be supplied on E.C.10 forms in 1-yd. quantities—a situation that took a lot of explaining to the doctor. Now 5-yd. reels may be supplied (and even two reels if 10 yd. is ordered) without reference back to the prescriber being necessary. This ruling also covers absorbent gauze lints, cotton wool and chiropody felt. Absorbent gauze in 25-yd. packets, and ribbon gauze, 6 yd. x ½ in. and 1 in., are also included in the Tariff.

Marking Time

WHOEVER received with scepticism the Health Minister's parliamentary reply (*C. & D.*, February 24, p. 231) to the effect that "when agreement is [internationally] reached, urgent consideration will be given to revising the British standards" of identification marks for medical gas cylinders would have had cause for his reaction. The same sort of reply (in the sense of promising action some time in the future) has been given so often before. But a paragraph in the "*Lancet*" (February 24, p. 478) suggests that the end is visibly nearer than before. The paragraph reports that provisional agreement has already been reached, at a meeting of the International Standards Organisation, between representatives of the United Kingdom and United States, on the adoption of certain colour markings and of non-inter-

changeable couplings. "The agreement requires ratification by the appropriate bodies in each country. This is now being sought, and it is hoped that these proposals, which have been accepted by the International Standards Organisation will soon take effect." One may feel confident that measures accepted by the Americans will not perpetuate the current British lack of clear distinction between the nitrous oxide and oxygen cylinder markings. Let the Association of Anaesthetists and Dr. Charles Hill, who raised the matter in the House on February 14, but maintain their efforts, and the promised "urgency" of the Minister's "consideration" will have a speedy outcome in revised standards. The possibility of using the wrong gas in the operating theatre should then be finally eliminated from hospital life.

CORRESPONDENCE

Progress in Education

SIR,—Will you allow me a little space to answer your correspondent Xrayser (*C. & D.*, February 24, p. 229) in his criticism of my letter of February 17. If he will refer to that letter he will see that, far from wishing to lower the standard of educational requirements for the qualifying examination I distinctly state "If the qualifying examination had been brought up to date . . ." implying progress "along the right lines" and I still maintain that the present attitude is not along the right lines. One sometimes wonders whether our leaders have any experience of the general routine of the ordinary chemist and druggist business.

C. H. BERTRAM BOND.

Harborne, Birmingham.

Still a Separate Company

SIR,—In *THE CHEMIST AND DRUGGIST*, February 24, p. 246, there is an article entitled "Chemistry in the Great Exhibition of 1851." In the second column of this page, the following sentence occurs: "The names of Dinneford & Co. and H. Lamplough are still familiar, although they do not exist as independent firms today." We feel that this sentence implies that the identity of Dinneford & Co., Ltd., has disappeared and been merged into some other company. That definitely is not the case. Dinneford & Co., Ltd.,

still operates as a separate company, its registered offices being at 68 Pall Mall London, S.W.1, and the manufacture of Dinneford's pure fluid magnesia and tablet being carried out at our Watford factory
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Shopping Hours

SIR,—The Union of Shop, Distributive and Allied Workers makes the following comments on the recommendations contained in the report of the rigid box and carton industry team of the Anglo-American Council on Productivity (see p. 290) that shops should remain open after normal working hours, possibly on a rota system. Amending shops legislation should provide for a general closing hour of 6 p.m. That, with the provision of one late night of 7 p.m., provides reasonable facilities for shopping. It is unnecessary to talk of 8 p.m. and 9 p.m. shopping hours. Usually the industrial worker has either the whole day or the half-day on Saturday whereas with minor exceptions, the shop assistant has to work all day on Saturday and is able to provide the service reasonably necessary for industrial workers. Any wholesale extension of shopping hours to the extent recommended would add materially to overhead costs of distribution—either by overtime payments or by increased wage bills.

Manchester, 14.

C. HAMNETT.

HANS CHRISTIAN OERSTED—1777-1851

By Professor H. Baggesgaard Rasmussen

THE Danish scientist, discoverer of electromagnetism, Hans Christian Oersted, the centenary of whose death fell on March 9, was born on August 14, 1777, in Rudkøbing, a country town on the island of Langeland, Denmark. In the preceding year his father had acquired a pharmacy which for a long time had stood deserted and was falling into decay. Economic conditions of the family were therefore very modest until Hans's father, by skill and thrift, put the pharmacy on its feet again.

Educational facilities in the town, at that time, were so poor that Oersted did not have regular lessons even in the most elementary subjects, but was taught Danish by an old artisan, and foreign languages by the magistrate and the priest. He was for eleven years a pupil in his father's pharmacy. He and his younger brother, the later famous barrister and politician Anders Sandoe Oersted, attempted, by studying on their own, to increase their knowledge, with such success that eventually both, with only a little outside help, passed the entrance examination to the University of Copenhagen. At the university Hans studied mainly chemistry, physics and mathematics, but also philosophy and literature.

Pharmacy Manager

H. C. Oersted graduated as a pharmacist and managed the Løve Apotek in Copenhagen (see picture, p. 310) for some years. In 1799 he became a doctor of philosophy and embarked upon a career as a teacher, in which, apart from two interruptions for travel to foreign countries, he continued until his death.

The most important of Oersted's experimental work falls in the years around 1820. He investigated problems in physics and chemistry. In 1819 (during a period when many important alkaloids were being isolated) he isolated piperine from *Piper nigrum*. In 1824 he worked out a method for the preparation of certain metal chlorides, e.g., aluminium chloride. The metal itself was not isolated at that time, but Oersted prepared the chloride by heating a mixture of the oxide and charcoal to a dull red heat in a stream of chlorine. He also employed the method successfully for the preparation of other chlorides, e.g., silicon chloride. He obtained

an aluminium amalgam by the action of potassium amalgam on aluminium chloride, from which by distilling off the mercury he obtained a metal which resembled tin. An account of that work was published in a journal



Hans Christian Oersted

which was not well known, and therefore not much attention was paid to the paper. It has since been shown by examination of Oersted's unpublished notes and repetition of his experiments, that there can be no doubt that Oersted actually prepared an impure aluminium. The honour, however, of preparing aluminium and the examination of its properties fell to the German chemist F. Wöhler, who was urged by Oersted to work with aluminium compounds.

The most important of Oersted's physics experiments was the discovery of electromagnetism. From his lectures on "electricity, galvanism and magnetism," as it was called in the language of the day, he discovered that when the two poles of a galvanic element were connected the current produced a strong action on a mag-

netic needle. Oersted examined the subject carefully and confirmed his observations by demonstrations to his friends. He published his results in a small paper written in Latin and entitled "Experimenta circa effectum conflictuo electrici in acum magneticum." On July 21, 1820, that small treatise was sent to all of the most well-known scientific men in Europe, and it

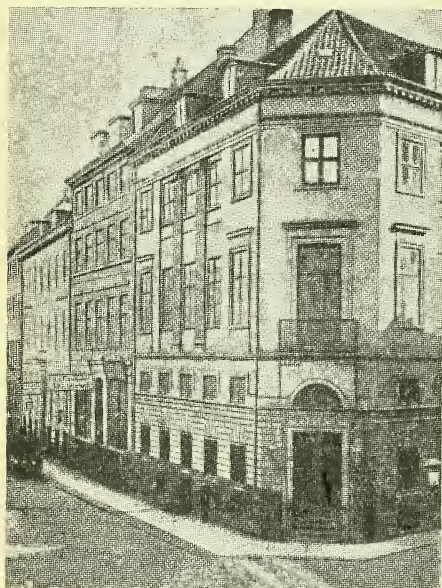
sion on Denmark. During a voyage to Great Britain in 1823 he made up his mind to accomplish something which would be of benefit to his country. The first result of that was the establishment of "Selskabet til Naturlærens Udbredelse" i.e., "Society for the propagation of natural sciences," the aim of which was to spread information and, in particular, knowledge of the natural sciences. Its prototype was the British Royal Society. Developments have since been made in Denmark according to Oersted's ideas.

New Pharmacy Examination

In 1828 he established a new, and for his period a modern, examination in pharmacy and was, until his death, chairman of the commission of pharmaceutical examiners. Another outcome of his decision was his reforming of the Royal Danish Academy of Science, so that natural sciences were given their rightful place and finally in 1829 the establishment of the Danish Technical High School. This institution was originally destined to become an artisans' school but owing to Oersted's influence it became a school for higher technical education on a scientific basis. Oersted was a lecturer and director there until his death and he attempted to win new ground for scientific education.

His philosophy in the beginning agreed with the German philosophy of nature which was very confused, as new ideas were continuously being brought to the fore. Finally, by contrast, he became a pure scientist. In that he reminds one of Goethe, from whom he differed by his even Danish temperament. He was in the best meaning of the word a good Dane, and he defined the Danish temperament in an obituary on the death of the sculptor Berthel Thorvaldsen as: "Kind, composed but active, of a balanced nature, equally removed from the two vices, arrogance and humbleness."

His deeds are expressed by one of his biographers thus: "when he began his life's work, Copenhagen with regard to experimental science could be compared with a country town. The chemical laboratory was only an annex to a pharmacy and natural sciences at the university a subsidiary to medicine. When he had completed his work, their independent position was established in the university and in high school education, and institutions were founded for their application in practical life."



Loeve Apotheket, Copenhagen, 1798-1906

awakened so great an interest that nearly all the physicists in Europe laid aside all other work to study electro-magnetism. Numerous experiments followed, in particular in French and English circles, culminating in M. Faraday's discovery of induction.

Scientific research in Denmark at that time was in very miserable circumstances, and partly because of that Oersted did not carry on further experiments with electro-magnetism. During the 'twenties he finished his experimental work, and became deeply engrossed in the study of philosophy—in which Kant and Fichte were his teachers—and administration. During the whole of his life he was extremely interested in poetry: he wrote poems and was friendly with poets of the period.

Oersted's work as a teacher and administrator has made a deep and lasting impres-

WORK OF THE WORLD HEALTH ORGANISATION

Abstract of an address by Dr. W. A. Timmerman (director of the therapeutic substances division, World Health Organisation) to an evening meeting of the Pharmaceutical Society of Great Britain in London on February 5.

THE World Health Organisation, initiated by a proposal from China and Brazil during a foundation conference of the United Nations in San Francisco in 1945, may well be considered by future historians as one of the most daring of all international enterprises. Its constitution includes several concepts of a revolutionary character. Above all, it defines health as "a state of complete physical, mental and social well-being" and not merely the absence of disease or infirmity. The Organisation is open to all states. It was agreed at an International Health Conference in 1945 that in addition to W.H.O. carrying out the tasks of preceding health agencies, it should be given the possibility of directing necessary operations from its headquarters. Only China and Britain signed the constitution without reservation.

Interim Commission

A W.H.O. Interim Commission was appointed, and to it were soon transferred, for example, sections of the work of the *Office International d'Hygiène Publique*, and the Health Organisation of the League of Nations. Expert committees were set up, among them one for biological standardisation, which adopted new international standards for penicillin, heparin and vitamin E, and formulated recommendations on a variety of therapeutic, prophylactic and diagnostic agents. Other Expert Committees tackled the task of establishing uniform rules of nomenclature, dosage and definition for drugs, with the ultimate aim of preparing an International Pharmacopœia, and the study of the medical aspects of the control of narcotics. Expert committees prepared plans for the world control of malaria, tuberculosis and venereal diseases, and technical aid was given to United Nations Children's Emergency Fund in the carrying out of mass vaccination with BCG. In China alone, thirty-two experts helped national authorities in the control of plague, cholera, kala-azar and tuberculosis. Among many other schemes a team of American and Swiss specialists, under the joint sponsorship of the Interim Commission and the Unitarian Services Committee, toured Austria to demonstrate new medical and sur-

gical techniques and the use of modern drugs and sera.

Fellowships were awarded to assist countries in the training of expert health personnel, and a number of journals were published through the Commission's technical services.

First World Health Assembly

The first World Health Assembly, which was convened at Geneva in June 1948 and attended by delegates and observers from sixty-eight nations, completed plans for an international fight against malaria, tuberculosis and venereal diseases, for raising of the health of mothers and children, ameliorating environmental conditions and improving nutrition.

As a result of the Assembly, the W.H.O. came officially into being as a specialised agency of the United Nations on September 1, 1948. During the next two years Regional Offices took over the duties of directing the health work in South-east Asia, the Americas, Eastern Mediterranean countries, Europe, Western Pacific countries and Africa.

Difficulties met by teams may be typified by that of an anti-syphilis team in the isolated Ghund valley of the Himalaya mountains. In making a re-survey the team found that peasants (who believed that it took ten grains of rice to make one drop of blood) objected, "What you are really doing is to take our blood to send it up to Kashmir where the fighting is going on." The team sent an S.O.S. to its serologist, vainly waiting for blood-samples at the laboratories in Simla. Two days later mules were brought out and a new field laboratory was transported to the Ghund Valley. Once the people could see for themselves what was being done with their blood, confidence quickly revived. They flocked from miles around to the field laboratory.

W.H.O. is responsible for technical guidance and evaluation of results in the vast anti-tuberculosis campaign which has been conducted by the Danish Red Cross together with its Scandinavian associates and the U.N. International Children's Emergency Fund, and has already advised some fifteen countries in setting up or improving their anti-tuberculosis services. A

modern tuberculosis training centre has been set up in Turkey with W.H.O.'s assistance. India and Mexico have received aid in establishing BCG laboratories, while a demonstration and training team was sent to El Salvador.

Veneral diseases and bejel, in particular, are among the important health problems on which W.H.O. has begun to render assistance to countries of the Eastern Mediterranean. Large-scale anti-V.D. programmes are under way in Haiti, Indonesia, Thailand, India and Ecuador, with special emphasis on early syphilis, syphilis in pregnancy, pre-natal and infantile syphilis. U.N.I.C.E.F. supplies have proved indispensable.

Through the co-operation of experts working under the auspices of W.H.O.'s technical services, international standards for sixteen more biological substances (including ACTH) were established or authorised in 1950. Standards were also set for aureomycin and terramycin.

International Pharmacopœia

The W.H.O. Division of Therapeutic Substances has also prepared an International Pharmacopœia—to be published shortly in English and French. W.H.O. is also charged with the responsibility for advising the United Nations on addiction-producing drugs.

Through the recent publication of a new manual of "International Statistical Classification of Diseases, Injuries and Causes of Death," an important step has been taken towards assuring the greatest possible degree of comparability in health and vital statistics on a world-wide basis. W.H.O.'s Technical Services are also contributing to research on virus diseases such as influenza, trachoma and poliomyelitis, and parasitic diseases, including filariasis and bilharziasis. Technical services given by W.H.O. through the seminars, conferences, and study groups and through the meetings of its various expert committees are integral parts of a four-year plan which the W.H.O. Executive Board has drawn up. The specialised agencies of the United Nations were created to provide a framework within which all nations can work together for their mutual benefit in the more or less technical fields of human endeavour.

The budget of W.H.O. for 1951 is just a little more than 6 million dollars. Is it utopian to maintain that the protection of our own health and of the health of our children through international action deserves far greater financial sacrifice?

Discussion

In the discussion which followed the lecture, Miss V. W. BURRELL asked Dr. Timmerman what procedure was adopted by the World Health Organisation to combat epidemics. Dr. TIMMERMAN replied that a recent cholera epidemic in Egypt provided an example. The Egyptian authorities informed W.H.O. of the existence of the epidemic and the organisation then telephoned countries all over the world for medical supplies. The U.S.A. had the greatest stocks of supplies required, and the greatest facilities to make the necessary vaccines, but within three to four days sufficient vaccine had reached Egypt from all possible sources for the anti-cholera campaign to commence. The campaign was hindered, however, by lack of syringes and needles (of which six to eight thousand were required). Insufficient were forthcoming from normal sources of supply but the health commissioner of New York lent six thousand needles which had been accumulated for a health scheme in his area. During the campaign fourteen million people were vaccinated. The relative potencies of vaccines from the various countries were also assessed.

Mr. K. J. WALKER, Surbiton, Surrey, asked if the Organisation had experienced difficulty with restrictive patents on antibiotics. The difficulty of patents, said Dr. TIMMERMAN, had already been met in the Organisation's schemes to help governments that wanted to set up plant for manufacturing antibiotics. The Organisation wanted five or six antibiotic centres throughout the world which kept no secrets, technical or medical. It wished to make antibiotics available as freely and cheaply as possible. Dr. TIMMERMAN told Mr. E. SANDERSON, Harrow, that technical reports were issued by the Organisation's twenty-four expert committees annually. The lecturer told another questioner that no resistant organisms in syphilis cases had been found so far in the Ghund valley. In India, however, where the proportion of cases seen was not so large, a few cases of resistance had been reported. The development of flies resistant to DDT had been reported from Corsica.

Dr. C. H. HAMPSHIRE, on the invitation of THE CHAIRMAN (Mr. A. A. Meldrum, president of the Society) proposed a vote of thanks to the speaker. The Society took it as a great honour, he said, that Dr. Timmerman should make the long journey in order to be able to deliver the lecture personally.

INSECTICIDES AND THEIR STUDY

Abstract of a Fernhurst lecture given by Mr. C. Potter, D.Sc., Ph.D., D.I.C. (Head of the department of insecticides and fungicides, Rothamsted Experimental Station), to the Royal Society of Arts earlier in the year

THE major stimulus to search for synthetic organic insecticides was provided by the introduction of DDT during the war. As a result a number of synthetic organic chemicals have partially supplanted, or greatly supplemented, the earlier inorganic and natural plant products.

Synthetic Chemicals Used

DDT (dichloro-diphenyl-trichloroethane, or, more accurately 2, 2-bis-(*p*-chlorophenyl)-1, 1, 1-trichloroethane) can act as a stomach poison and as a contact poison to insects. It has no fumigant action, and no action on insect eggs as normally applied. The major danger of DDT to human beings is its cumulative effect.

The Germans have used the fluorine analogue of DDT (D.F.D.T.) and claim that it is quicker in its action. The methoxyl analogue, called methoxychlor, is a useful insecticide and is reported to have a considerably lower mammalian toxicity than DDT. The dichloro analogue (DDT) and the bromine analogue have also been used. Any assessment of the relative merits of DDT and its analogues is complicated by their specificity of effect.

The insecticidally active constituent of benzene hexachloride is the γ isomer of 1, 2, 3, 4, 5, 6-hexachlorocyclohexane. Four other isomers have been isolated but they do not show any marked insecticidal action. Recently the technically pure isomer has been marketed in the U.S.A. under the commercial name of Lindane. The pure gamma isomer is more volatile than DDT (but it still has good residual properties) and can be used as a fumigant in some circumstances. It is toxic to a wide variety of species of insect and is used for the control of a number of insect pests, notably oil pests, grasshoppers and locusts.

Chlordane has been used in the United States and elsewhere. The technical product is reported to contain 60 per cent. chlordane. The refined product is a viscous, nearly odourless, liquid boiling at 17°C. at 2 mm. pressure. It is insoluble in water and it is capable of acting as a stomach poison, contact poison and fumigant and can have a lasting residual action. Its field of usefulness is not yet clearly defined but it has shown promise against soil pests

and also for the control of grasshoppers. Toxaphene has not yet been employed to any extent in England. It is chlorinated camphene containing about 67 per cent. chlorine, with an empirical formula $C_{10}H_{10}Cl_8$. Its chemical structure is still under investigation. The technical product is a cream coloured waxy solid with a mild piny odour and a melting range of 65-90°C.; it is insoluble in water.

Aldrin and Dieldrin, also chlorinated hydrocarbons, have been reported as highly toxic to insects. Aldrin is relatively volatile and has no long-lasting residual properties. Dieldrin is stable and non-volatile and can retain its insecticidal potency for long periods after application. Both are insoluble in water. Aldrin is a white crystalline solid with a melting point of 104-105°C., and is reported to be substantially odourless at room temperature although the technical product may have an unpleasant odour. Dieldrin, which is the product of oxidation of Aldrin with per acids, is also an odourless white crystalline solid with a melting point of 175-176°C. Both chemicals are very stable to alkaline reagents in aqueous and alcoholic media. Under conditions of practical use they appear unaffected by acidic reagents. They both appear to be more poisonous to mammals than the other chlorinated hydrocarbons under review and this may limit their use.

Organo-Phosphorus Compounds

Organo-phosphorus compounds were introduced as insecticides as a result of researches in Germany during the war. They appear to be offshoots from the work on chemical warfare, and those in current use are very highly poisonous to mammals. They are in common use in England.

The major active constituent of hexaethyl tetraphosphate (H.E.T.P.) and tetraethyl pyrophosphate (T.E.P.P.) appears to be tetraethyl pyrophosphate, and the name depends on the percentage of this active ingredient in the concentrated product. Materials with a low percentage being called H.E.T.P. Materials containing T.E.P.P. are effective against various species of aphids and have been widely used for their control.

Parathion (O.O. diethyl O. P. nitrophenyl thiophosphate) in its pure state is a pale yellow almost odourless oil it crystallises in long needles, m.p. 6°C ., with an estimated boiling point of about 375°C . at 760 mm. and an s.g. of 1.26. The technical product may have a garlic-like odour. The compound has proved highly toxic to a wide range of insects, and has considerable ovicidal properties. Its uses are limited because of its high toxicity to mammals.

During the course of experimental work on the organo-phosphorus compounds it was found that some of them, when applied to the aerial parts of the plant or to its roots, were taken up and translocated to parts of the plant and rendered the plants poisonous to insects feeding on them. Bis (bis dimethylamino) phosphonous anhydride is now used commercially for the control of aphids. It has high mammalian toxicity and must be used with caution. Mention must be made of synthetic compounds allied to the pyrethrins particularly the substance known as allethrin.

Research on Pyrethrum

Following the work of Staudinger and Rusicha and a long series of researches by workers in the United States and Great Britain on the constitution of the insecticidally active constituents of pyrethrum flowers and the synthesis of compounds allied to them, Schechter and LaForge in the U.S.A. synthesised the allyl analogue of cinerin 1 (allethrin), one of the four recognised active constituents of pyrethrum flowers. It appears to have a high toxicity to several insect species and to possess a number of the desirable properties of pyrethrins, especially their lack of toxicity to mammals. Azobenzene and various nitro substituted phenyl derivatives are used to control various mite pests; but since these are not insects they are left out of this survey.

It seems highly desirable that the search for new insecticides should be directed, when possible, to the discovery of compounds with insecticidal properties and low mammalian toxicity, and for this reason alone the introduction of allethrin is regarded as important.

The fact that a given chemical will be highly toxic to one species of insect and relatively ineffective against another species, and that the effectiveness of the poison will vary with the stage of develop-

ment, is now widely recognised. Rotenon applied in aqueous suspension to various species of aphids is found to be highly toxic and yet, applied in a similar suspension and under similar conditions to grain weevils, it is non-toxic even in high concentrations. This type of specificity may be referred to as species-specificity. DDT in aqueous suspension is applied to the eggs of tomato moth it is non-toxic at the highest practical concentration. When applied to the larvæ it is highly toxic, the toxicity varying with the stage of development of the larva. This type of specificity may be referred to as instar specificity.

Specificity of Insecticides

Special aspects of the subject of specificity of insecticides are their effects on pollinating insects, particularly bees, and the production of strains of insect which are resistant to insecticides.

Comparatively little direct work has been done on the causes of specificity and this may be due, at least in part, to the fact that the development of insecticide has rested largely in the hands of the organic chemist rather than with the biochemist and biologist. At present the insecticide is applied to the insect, and the only criterion used to determine its effect is the death or survival of the individual. In the vast majority of cases virtually nothing is known of the process that determines the result. I believe that before the search for, and the use of, insecticidal chemicals can be put on a rational basis, the mechanism of their action on the insect must be worked out. This involves a knowledge of the morphology, physiology and biochemistry of insects which does not yet exist, and especially a knowledge of insect biochemistry.

A PHARMACIST'S ANTHOLOGY

I REMEMBER, when I used to hang about the biological laboratories at school, evincing frogs . . . in came that laboratory boy and said to the stinks usher; "Please, sir, may I have the key of the Absolute?" And, would you believe it, that usher calmly put his hand in his trouser pocket and fished out a small Yale key and gave it him without a word. What a gesture! The key of the Absolute. But it was only the absolute alcohol.

From "Antic Hay," by Aldous Huxley.

INDONESIAN CINCHONA

THROUGH many vicissitudes, two world wars and the introduction of synthetic antimalarial products, quinine retains its pre-eminence as the tried and proven drug in the prophylaxis and treatment of malaria. The growing importance of many derivatives of cinchona in medical fields other than malaria (particularly the use of quinidine in auricular fibrillation) holds promise that the life-saving bark of the plantations of Indonesia will continue to serve mankind for many years to come and provide Indonesia and Holland with a valuable export trade.



The story of the successful culmination of cinchona production in Java is well-known, but this came only after tenacious and painstaking effort on the part of the Government Cinchona Estate, in the face of early criticisms that finally amounted to open hostility. Mankind owes a debt of gratitude to Dutch pertinacity and the chance contribution by Ledger of the prized seeds which were to revolutionise cinchona culture in Java. The high-yielding bark of *C. Ledgeriana* started Indonesia and the Netherlands on the road to supremacy they occupy in the industry. Exports of cinchona bark from Indonesia January-November 1950 totalled 1,759 metric tons.



Top: Young trees are set out in rows among plots of older trees. Those scattered at the right are about twenty-five years old.

Centre: The roots are recovered, because they contain a high proportion of quinine.

Bottom right: Young women sorting fertile, high-quality seeds for replacement of trees cut down.

Left: Bark is carefully removed by native workmen.

TRADE REPORT

Spot quotations for pharmaceutical chemicals represent the prices for wholesale quantities of standard quality. Prices of crude drugs and essential oils vary as to brand or grade

London, March 7

DEMAND for a wide range of PHARMACEUTICAL and FINE CHEMICALS continues on a high level, but production in many instances is being held up by current shortages of raw materials, of which scarcity of SULPHURIC ACID is most influential. Output of BROMINE has been reduced and deliveries have had to be cut; suppliers, however, take the view that normal demands can be met in due course without resorting to rationing of supplies. ASPIRIN is in good inquiry, and here again supplies available both for the home trade and export are much less than demand. With rising costs of raw materials and production, prices of chemicals are still moving upwards. During the last few days increases have been announced in the rates for the OPIUM ALKALOIDS and for STRYCHNINE and BRUCINE. A number of BISMUTH PREPARATIONS are dearer. The minor BROMIDES have been brought into line with the increased cost of bromine. Trading on the CRUDE DRUGS market has been somewhat slow and confined to a relatively small number of articles. STYRAX has been receiving a good demand and is now rather scarce on the spot. At origin shippers are quoting Cape ALOES at higher prices though business has been reported at as low as 280s. to 285s. per cwt., c.i.f., for March-April shipment. BUCHU is selling slowly on the spot; new-crop leaves for shipment are slightly easier. Sumatra BENZOIN is unchanged in price and several parcels are now afloat. There is still no IPECACUANHA on the spot and supplies are wanted; offers for shipment are difficult to get. SENEGA is a steady market. Higher prices are asked for COCHINEAL on the spot.

The market for ESSENTIAL OILS, generally, has been quiet, with consumers reluctant to pay current high prices. Prices from the origin for Italian LEMON are still rising and offers are very few in number. Chinese PEPPERMINT, Ceylon CITRONELLA and LEMONGRASS are firm markets. Spanish SPIKE LAVENDER is extremely short at the source and shippers are asking higher prices. New-crop ROSEMARY is dearer. A revaluation of the Paraguayan currency will probably result in lower prices for PETITGRAIN.

U.S. Drug and Chemical Report

New York, March 2

DEMAND for many chemicals at present is running well ahead of available supplies. TARTRATES and CITRIC ACID are in a generally tight supply position. Domestic producers of tartrates are concerned

at the immediate outlook, in the face of rising costs of crude material and current ceiling prices. Makers' prices of citric acid are virtually nominal with supplies very scarce. A number of SALICYLATES are also in very short supply, under the influence of a heavy demand and scarcity of PHENOL. A brisk demand is being received for ACETANILIDE and the ANTI-BIOTICS. A shortage of NICOTINIC ACID said to be due to insufficient QUINOLIN supplies, is expected to be only temporary. Consumers are not showing much interest in MENTHOL and prices are losing ground. Current quotations are in the region of \$13.65 per lb. In CRUDE DRUGS, a firm tone has developed in Cape ALOES with an increase in inquiry. GUM ACACIA is firm owing to labour difficulties at the source. Demand for TRAGACANTH is rather heavy and supplies are tight. Little COPAIBA is to be had on the spot or for shipment and BALSAM TOLU continues scarce. CARNAUBA WAX prices are again rising and there are few offers of spot supplies. It is thought that supplies on the spot by March or April will be very small, following resistance by buyers to the present high prices quoted from Brazil. Prices of several ESSENTIAL OILS have moved upwards and, in those instances where production or import costs have increased to above individual ceiling levels, dealers have been obliged to withdraw from the market. There has been a good inquiry for MINT OILS. Italian BERGAMOT and LEMON are firm.

Pharmaceutical Chemicals

ANTIMONY SULPHIDE.—Prices are from 290s. to 300s. per cwt.

BORAX.—Higher prices are shortly coming into effect. New rates per ton for B.P. in quantities of 1 ton and upwards are as follows:—Granular, £46; crystal, £48 10s.; powder, £49 10s.; extra-fine powder, £50 10s. In 1-cwt. bags; carriage paid in Great Britain. Surcharges: As for boric acid.

BORIC ACID.—Higher prices are shortly coming into effect. New rates for B.P. per ton, in 1-ton lots and upwards, are as follows:—Granular, £78; crystal, £85; powder, £82 10s.; extra-fine powder, £84 10s.; small flake, £98. In 1-cwt. bags; carriage paid in Great Britain. Surcharges for smaller quantities: Less than 1 ton but not less than 5 cwt., 1s. per cwt.; 3 cwt., 2s.; 1 cwt., 5s.

BRUCINE. — Dearer. Alkaloid is now from 1s. 8d. to 1s. 9½d. per oz., and nitrate and sulphate from 1s. 7d. to 1s. 8½d. per oz., as to quantity.

CALAMINE. — Pharmaceutical quality is 7d. per lb. in 1-cwt. lots.

CALCIFEROL.—1-kilo lots (in 25-gm. ampoules) are quoted at 5s. per gm.; 500, 6d. per gm.; 100 kilo, 6s. 3d. per gm.

CALCIUM GLUCONATE.—Quantities of upwards of 3 cwt. are quoted at 3s. 6d. per lb.; 1 cwt. to 2 cwt., 3s. 7d. per lb.; smaller quantities up to 3s. 10d. per lb. in good demand.

CHLOROFORM.—1-cwt. lots in winchesters 3s. 2½d. per lb.; 56-lb., 3s. 3d. In drums, prices are 3s. 1d. and 3s. 1½d.

CHLOROXYLENOL.—B.P. quality is quoted 6s. 9d. per lb. for 1-cwt. lots.

GLYCERIN.—Rates for chemically pure (P.) are as follows:—

	Under 1 cwt.		1 cwt. and under 5 cwt.		5 cwt. and under 1 ton		1 ton and under 5 tons		5 tons and under 25 tons	
Minimum deliveries off contract of	—		1 cwt.		1 cwt.		5 cwt.		10 cwt.	
1 cwt.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
1-lb.	262	0	257	6	253	6	249	0	247	6
3-lb.	260	0	255	6	251	6	247	0	245	6
5-lb.	256	0	251	6	247	6	243	0	241	6
10-lb.	—	—	239	0	235	0	230	6	229	0
1-cwt.	—	—	236	0	233	0	228	6	227	0
5-cwt.	—	—	—	—	232	6	228	0	226	6
1-ton.	—	—	—	—	231	6	227	6	226	0

tons and upwards (minimum delivery off contract of 2 tons), 14-lb. tins, 246s. 6d.; 1-lb., 244s. 6d.; 56-lb., 240s. 6d.; 1-cwt. tins, 228s.; 2½-cwt., 226s.; 5-cwt., 224s. 6d.; 10-cwt., 225s. Extra charges made for smaller deliveries ex contract from 6d. to 2s. Tins and cases free, ss packages and iron drums charged extra and returnable. Drums will be credited in full only if returned carriage forward in good condition within four months date of invoice; if retained beyond six months their intrinsic value only will be credited, which will not in any case exceed two-thirds of the invoice price. Terms: 10 per cent. monthly account, except where noted net. (Refined pale straw industrial grade is 5s. per cwt. less than above).

HEXAMINE. — B.P. is offered at from 9d. to 2s. per lb., as to quantity.

LACTATES. — Prices are unchanged. In 1-cwt. lots CALCIUM, B.P., is 2s. 7½d. per lb.; smaller quantities, from 2s. 11½d. to 3½d. per lb. CALCIUM AND SODIUM, B.P.C., powder, in 1-cwt. lots is 3s. 11½d. per lb.; smaller quantities, from 4s. 3½d. to 4s. 7½d. per lb. SODIUM, B.P. 1932, is 4d. per lb. in 1-cwt. lots; smaller quantities, 2s. 7d. to 2s. 11d. per lb. LACTIC ACID, B.P., is 3s. 11d. per lb. in carboys and from 4s. 0½d. to 4s. 6d. per lb. in winchesters.

MAGNESIUM CARBONATE.—Prices current in the home market for LIGHT, B.P., in bulk, are: Not less than 1-cwt., 120s.; 5-cwt., 114s. 6d.; 10-cwt., 113s. 6d.; 1 ton, 112s. per cwt.

OPATES.—Prices rose on March 5. New home-trade rates (per oz.) for quantities of 5 oz. and upwards are as follows:—**CODEINE.** — Alkaloid, hydrobromide and iodide, 58s. 6d.; hydrochloride and sulphate, 51s.; phosphate, 44s. **MORPHINE.** — Alkaloid, bimeconate, and tartrate, 62s. 6d.; hydrochloride, acetate, hydrobromide and sulphate, 52s. **DIAMORPHINE.** — Alkaloid, 62s.; hydrochloride, 56s. 6d. **ETHYLMORPHINE.** — Alkaloid, 65s. 6d.; hydrochloride, 55s. 6d.

PAPAVERINE.—Synthetic Hydrochloride is in the region of £46 per kilo.

QUININE. — Makers' rates (per oz.) to home-trade distributors are given below; additional charges must be added for repacking, etc. **ALKALOID**, from 5s. to 5s. 6d.; **ACETYSALICYLATE**, 6s. 3d. to 6s. 9d.; **BISULPHATE**, 3s. 7d. to 4s. 1d. **DIHYDROBROMIDE** and **DIHYDROCHLORIDE**, 4s. 11d. to 5s. 5d.; **FORMATE**, 5s. 9d. to 6s. 3d.; **GLYCEROPHOSPHATE**, and **PHOSPHATE**, 5s. 5d. to 5s. 11d.; **HYDROBROMIDE** and **HYDROCHLORIDE**, 4s. 6d. to 5s.; **SALICYLATE**, 4s. 8d. to 5s. 2d.; **SULPHATE**, 4s. to 4s. 6d.; **QUININE** and **UREA HYDROCHLORIDE** is quoted from 4s. 10d. to 5s. 4d.

RESORCIN.—Steady. Prices are from 12s. to 12s. 6d. per lb.

SACCHARIN.—In lots of 1-lb. and over B.P. powder is quoted at 98s. 4d. per lb.; the **SODIUM SALT** is 79s. 4d. per lb. Prices include duty and carriage.

SALICYLIC ACID.—Prices are unchanged. 5-cwt. lots are 2s. 6½d. and 1-cwt. lots, 2s. 7d. per lb. Scheduled rates in the home market for quantities of 28 lb. and under 1-cwt. are from 3s. 1½d. to 3s. 5½d. per lb., as to pack.

SANTONIN. — Scarce. The following makers' prices per kilo apply in the home market, including Eire:—5-kilo lots, £89 10s.; 2-4-kilo lots, £91; 1 kilo, £92 10s.; 500gm., £94; 250 gm., £95 10s.; 100 gm., £97; smaller quantities, £98 10s.

STRYCHNINE.—Prices advanced recently. New rates per oz. are as follows:—

COMPOUND	Under 25 oz.		25 oz. and under 100 oz.		100 oz. and under 500 oz.	
	s.	d.	s.	d.	s.	d.
ALKALOID, B.P.C.	7	4	7	2	6	11
BISULPHATE ...	6	2	6	0	5	9
HYDROCHLORIDE, B.P. ...	6	11	6	9	6	6
NITRATE, B.P.C. ...	6	11	6	9	6	6
PHOSPHATE ...	8	0	7	10	7	7
SULPHATE, B.P.C.	6	5	6	3	6	0

ZINC SULPHATE. — Makers quote 11½d. per lb. for 1-cwt. lots.

Crude Drugs, etc.

ACONITE. — Steady. Spanish *napellus* on spot, 3s. 6d. to 3s. 9d. per lb., duty paid.

AGAR.—Kobé No. 1 on the spot is from 9s. 3d. to 9s. 6d. per lb., duty paid.

ALOES.—The origin is asking 305s. per cwt., c.i.f., for prime Cape, with business done at from 280s. to 300s., c.i.f., for shipment. Curacao on the spot is offered at from 292s. to 297s. per cwt., as to seller and quality; for shipment, 285s., nominal, c.i.f.

ARECA NUTS.—Ceylon, f.a.q., on the spot, are from 40s. per lb.

ARNICA FLOWERS.—Spot quotations are from 1s. 3d. to 1s. 4d. per lb., duty paid.

BELLADONNA.—Root on the spot is offered at 3s. 10½d. per lb. Italian leaves, 3s. 6d. per lb., ex warehouse.

BENZOIN.—Sumatra block on the spot is steady at £30 per cwt.; afloat, £28, c.i.f.; for shipment, £27, c.i.f., nominal. Siam almonds on the spot are 38s. per lb.; afloat, 33s. to 35s. (landed terms). Broken almonds, 26s. 6d. per lb., spot; afloat, 22s. (landed terms).

BISMUTH. — In minimum 5-cwt. lots metal is now 22s. 6d. per lb.

BLACK HAW. — Tree bark is offered at 3s. 3d. per lb., ex store.

BUCHU.—Old-crop short rounds on the spot are selling at 2s. 2d. per lb.; new-crop, for March-April shipment, 1s. 10½d., c.i.f.

CALUMBA.—Natural sorts are quoted at from 75s. to 80s. per cwt., spot.

CAMPHOR. — Chinese refined powder (B.P.) is 5s. to 5s. 3d. per lb., spot, duty paid (4s. 7½d. in bond); ¼-oz. tablets, 6s. 6d., duty paid.

CAPSICUMS. — African on spot is 190s. to 250s. per cwt., as to grade.

CASCARA SAGRADA.—Steady. 1950 bark on spot is 385s. to 390s. per cwt., duty paid (350s. in bond); for shipment, 350s., c.i.f.

CASCARILLA. — Quills on the spot are 1s. 4d. per lb.; siftings, 1s. 2d. per lb.

CHAMOMILE FLOWERS. — Belgian No. 1, 4s. to 4s. 3d.; No. 2, 3s. 6d. per lb., ex warehouse London.

CHILLIES. — Mombasa, spot, quoted at 345s. per cwt.; for shipment, 315s. to 320s. per cwt. Sierra Leone, spot, 340s. per cwt. Nigerian, No. 1, 310s.; No. 2, 280s. per cwt., spot.

CLOVES.—Steady. Zanzibar is nominal at 4s. 6d. per lb. on the spot; for shipment from the origin, 4s. 6d., c.i.f.

COCHINEAL.—Dearer. Black is quoted at 8s. 9d. and silver at 7s. 6d., ex warehouse London. In good inquiry.

COCILLANA BARK.—Spot quotations are at 2s. per lb., duty paid in London.

DRAGONS BLOOD. — Firm. A moderate trade has been done in Singapore re-boiled No. 1 at £60 to £62 per cwt., spot. No. 1, £48.

ERGOT.—Sellers are asking 85s. per lb. for spot supplies; no offers from Portugal.

GAMBOGE.—Siam pipe is at £40 to £42 per cwt., duty paid; powder is quoted 11s. 6d. per lb., spot London.

GENTIAN.—Firm. Holders of spot supplies are asking 150s. per cwt.; for shipment, 135s., f.o.b. French port, quoted.

GINGER. — African, spot, at 300s. per cwt.; new-crop for February-April shipment, 240s., c.i.f. Jamaican, new-crop February-April shipment, No. 3, 410s., c.i.f.

GUM ACACIA.—Kordofan cleaned sorts on the spot, 142s. 6d. per cwt.; for March-April shipment, 115s., c.i.f.

IPECACUANHA.—Firm. Nicaraguan, for March-April shipment, 53s. per lb., c.i.f. No supplies available on the spot.

IRISH MOSS.—No. 1 carrageen on the spot, 100s. per cwt., nominal.

JALAP.—Steady. Vera Cruz, 9-11 per cent. resin, is available on the spot at 3s. 6d. per lb.; 15 per cent., 3s. 9d. Brazilian (14.5 per cent.) is 2s. 2d. per lb. spot.

LANOLIN. — Anhydrous is quoted at from £135 to £150 per ton, as to grade.

LIQUORICE.—Anatolian natural root on the spot in London is offered at from 51s. 6d. per cwt. Russian natural is from 56s. to 58s. per cwt., spot London. Syria natural, cut, 55s. per cwt., ex warehouse London. British block juice, 150s. to 195s. per cwt., as to grade. Turkish block juice is quoted at from 150s. to 220s., duty paid, according to holder. Turkish stick is from 170s. per cwt., duty paid. Italian stick, 240s. to 475s. per cwt., duty paid.

LYCOPODIUM.—Triple-sifted material, on the spot, is 11s. per lb., duty paid.

MACE.—Quiet. West Indian pale blade is nominal at 9s. 9d. per lb.; for shipment 9s. 4d., c.i.f.

MALE FERN.—Steady. Jugo-Slavian material on the spot is 55s. per cwt.; for shipment, 48s., c.i.f.

MASTIC.—Quotations for tears (No. 2) are about 12s. 6d. per lb., spot.

MENTHOL.—Demand has slackened off. Chinese on the spot is 100s. per lb., duty paid (94s. in bond); for shipment from Hong Kong, 92s., c.i.f., nominal. Brazilian March-April shipment, 88s., c.i.f.; May-June, 82s. 6d. to 83s. 6d. per lb., c.i.f. nominal.

MERCURY. — Spot quotations are from £73 10s. to £74 per flask, ex warehouse.

MYRRH. — A moderate demand for all grades. Aden selected sorts are offered at £18 per cwt.; B.P. sorts, £14; siftings £8 10s.; spot London.

NUTMEGS.—West Indian 80's, 4s. 9d. per lb., nominal; unassorted, 3s. 9d., and verry, 3s., spot London.

ORANGE.—Spanish quarters are quoted at 1s. 6d. and thin-cut Tripolitanian, s. 2d. per lb., duty paid in London.

MORRIS ROOT.—Steady. Florentine is offered for shipment from origin at 140s. to 145s. per cwt., c.i.f.

PIMENTO.—Spot, sellers are asking s. 10½d. per lb.; for shipment, 200s. per wt., c.i.f.

QUASSIA.—Chips on the spot are offered at 35s. per cwt.; for shipment, 28s., c.i.f.

QUINCE SEED.—Cape on the spot, 4s. per lb.; Continental, 3s. 0½d. per lb., spot.

RHUBARB.—Sound Chinese rough round on the spot is from 5s. 4d. to 8s. per lb. in bond. Double Deer is 9s. 6d. per lb., duty paid.

SEEDS.—Turkish ANISE on the spot is 50s. per cwt. in bond, and 160s. per cwt., duty paid, in London. CARAWAY.—Dutch firm at 225s. per cwt., duty paid, spot London. CELERY.—Indian is quiet; sellers are quoting 1s. 10½d. per lb. spot London.

CORIANDER.—Market continues quiet both on spot and for shipment. Sellers of spot are now asking 200s. per cwt., duty paid, and 190s. per cwt., in bond. For shipment, old-crop, sellers are asking for bids in the region of 190s. per cwt., c.i.f.

CYPRIN.—Market remains firm. Cyprus only offering on spot at 260s. per cwt. New-crop Indian for March-April is 230s. per wt., c.i.f. DILL.—Indian remains quiet. Sellers are quoting 80s. per cwt., spot London. FENNEL.—Indian is in short supply with 120s. per cwt. quoted, spot London. FENUGREEK.—Morocco is 52s. 6d. per wt., duty paid, spot London or Liverpool. No Indian to be had on spot.

SENEGA.—Supplies on the spot are offered at 23s. 9d. per lb.; afloat, 23s. 6d., c.i.f.; for shipment, 23s., c.i.f., nominal.

SENNA.—Firm. Tinnevely leaves, f.a.q., No. 2, 1s. 5½d.; No. 3, 1s. 4d.; No. 4, s. 3d. per lb., all ex warehouse London. Tinnevely pods, hand-picked, 2s. per lb.

SHELLAC.—Spot F.O.T.N., pure is 420s.; F.O. Standard 1, 440s.; and fine orange, 50s. to 515s. per cwt.

STROPHANTHUS.—Firm. *Kombé*, 100 per cent., is 21s. per lb. on the spot.

STRAX.—Scarce. Sellers are asking s. 9d. per lb. for spot.

TRAGACANTH.—Firm. No. 1 ribbon on the spot is £200 per cwt.; No. 2, £175; No. 3, £155; No. 4, £85.

TURMERIC.—Madras finger is offered at 100s. to 105s. per cwt., spot London.

VALERIAN.—Belgian on the spot is quoted at 185s. to 190s. per cwt., spot. Indian 160s. per cwt., spot; for shipment, 160s., c.i.f., quoted.

Essential and Expressed Oils

ALMOND.—Expressed sweet oil (B.P.) on the spot is from 6s. per lb. Bitter essential oil, s.a.p., on the spot, is from 24s. to 55s. per lb., as to grade.

ANISE.—Supplies on the spot are offered at from 15s. to 15s. 3d. per lb.; for shipment, 14s. 9d., c.i.f.

CARAWAY.—Firm. English-distilled is available at 50s.; imported oils are from 37s. 6d. to 40s. per lb., on the spot.

CASSIA.—Spot supplies are offered at 35s. to 36s. per lb.; for March-April shipment, 34s. per lb., c.i.f.

CITRONELLA.—Firm. Ceylon is nominal at 18s. 6d. per lb. on the spot; for shipment, 19s. 6d. per lb., c.i.f.

CLOVE.—English distilled bud oil is from 30s. to 30s. 9d. per lb.; Zanzibar-distilled stem oil is nominal at 18s. per lb., spot.

COPAIBA.—Spot quotations are from 20s. per lb. A firm market.

CORIANDER.—English-distilled is quoted at about 240s. to 260s. per lb. Dutch on the spot, 175s. per lb., duty paid.

DILL.—English-distilled oil is quoted at about 65s. per lb. for B.P. quality. Imported oils are offered at from 45s. to 55s. 3d. per lb., as to quality.

FENNEL.—Spanish sweet on the spot is offered at 15s. per lb.

GINGER.—English-distilled is from 170s. to 200s. per lb., as to grade and seller; imported oils. 175s. to 185s. per lb., spot.

JUNIPER BERRY.—Imported oils are quoted at from 18s. to 20s. per lb., duty paid; English-distilled, first quality, is offered at from 75s. to 80s. per lb.; B.P.C. oil is 22s.

LAVANDIN.—Scarce. Nominal quotations are from 40s. to 42s. 6d. per lb.

LAVENDER.—Firm. French, 38-40 per cent. linalol, on the spot is nominal at 53s. 6d. to 55s. 6d. per lb.; 40-42 per cent., 55s. 6d. to 57s. 6d. Spanish spike is from 25s. per lb. on the spot; for shipment, 26s., c.i.f., quoted.

LEMON.—New-crop oil for shipment is in the region of 67s. 6d. to 68s. per lb., c.i.f.

LEMONGRASS.—Firm. Spot, nominal; for shipment, March-April, 33s., c.i.f.

OLIVE.—French or Spanish oil is quoted at from 35s. to 36s. per gall. (9-lb.) in drums, ex wharf.

PEPPERMINT.—Chinese continues short on the spot and is about 33s. 6d. to 34s. 6d. per lb.; for shipment, 32s. 6d., c.i.f., nominal. Piperita is available at from 57s. 6d. to 65s. per lb., as to grade.

ROSE.—Bulgarian otto is quoted at 350s. per oz., spot London.

ROSEMARY.—Firm. Spanish on the spot is 9s. 2d. to 10s. per lb., duty paid.

TRADE MARKS

From the "Trade Marks Journal," February 21.

For pharmaceutical substances and preparations (5).

NORADRAN, 688,931, by Wallace Manufacturing Chemists, Ltd., London, N.W.3. LANGIDOL, 693,218, by C'ba, Ltd., B'sle. CERVEMOL, LECERVAL, 694,030-33, by Harker Stagg, Ltd., London, E.1. CAMBETA, 694,230, by Camden Chemical Co., Ltd., London, W.C.2. DREPHABALM, 694,799, by Christie George & Co., Farnworth.

For moth-killing preparations (5).

PARIDIC, 689,155, by J. M. Loveridge, Ltd., Southampton.

For analgesic and sedative preparations (5).

KEMTHEUTAL, KEMTHEUTIC, 691,335-36, by George Wright Taylor, Sheffield.

For analgesic and medicated tonic preparations (5).

MOLDOMIA, 691,338, by George Wright Taylor, Sheffield.

For medicines in tablet form for the treatment of boils (5).

BOILQUAR, 693,114, by William Joseph Pearle, Birmingham.

For antiseptic preparations and substances and disinfectants (5).

JADDOSOL, 693,413, by Hope, Hartope & Co., Ltd., London, W.6.

For all goods (5).

STERISPON, 694,576, by Allen & Hanburys, Ltd., London, E.2.

For hair curlers (26).

DREAM, 692,188, by Tip-Top Products, Co., Nebraska.

(From the "Trade Marks Journal," February 28)

For shampoo powders (3).

EVENING GLORY, 684,823, by Stotherts, Ltd., Atherton.

For non-medicated toilet preparations, perfumes, soaps, and cosmetics (3).

TREVIT, 688,518, by Kurt Josef Pfeiffer, Geneva.

For non-medicated hand creams (3).

HANDREINE, 695,143, by Reine des Crèmes, Ltd., Greenford.

For blood plasma and substitutes therefor (5).

PLASMODEX, 683,235, by Dextran, Ltd., Darlington.

For fungicides and insecticides (5).

PENTAFIN, 690,337, by P. W. Finch & Co., Godalming.

For pharmaceutical preparations (5).

ALFAN, 693,111, by Amblins Sales Co., Ltd., London, N.W.6. APOLOMINE, 693,939, by Bayer Products, Ltd., London, W.C.2. CORMICAL, 695,406, by Stanning Proprietaries, Ltd., London, W.1.

For medicated preparations for the treatment of the skin (5).

SOFTAN, B694,004, by the Crookes Laboratories, Ltd., London, N.W.10.

For industrial and photographic chemicals (1).

BONO, B692,929, by Aktiebolaget Bofors, Bo.

For surgical and medical bandages and dressings (5).

PROOFPLAST, HEALAPLAST, B694,377-78, by Wallace, Cameron & Co., Ltd., Glasgow.

For disinfectants (5).

TELESAN, 694,807, by W. C. Evans & Manchester.

For pharmaceutical preparations, medical and surgical plasters, and bandaging materials (5).

SURGITUBE, 649,837, the Scholl Manufacturing Co., Ltd., London, E.C.1.

For insecticides (5).

WHAM, OUTSECT, 695,201-02, by New Wham, Ltd., London, W.C.1.

For belts and pads for surgical and curative purposes (10).

PRODEAP, 695,113, by Samuel Berg, London, W.10.

For toothbrushes (21).

DE PATOUL, B691,694, by Rockwell Co. (Darlington), Ltd., Darlington.

PRINT AND PUBLICITY

Medical Leaflets.—Leaflets, folders and booklets obtainable from manufacturers include those listed below:—

ROCHE PRODUCTS, LTD., Welwyn Garden City. "Vitamins in Medical Practice" (64 pp.).

ALLEN & HANBURYS, LTD., London, E.2. "Concerning I-so-gel" (4-p. leaflet).

THE BRITISH DRUG HOUSES, LTD., Multi-Anahemin (both 4-p. leaflets) and Dehydrochlo-B.D.H. (blotter).

BAYER PRODUCTS, LTD., Africa House, Kingsway, London, W.C.2: "Eumydrin" drops (for use in whooping cough); "Neoselaron"; "Novalgin"; "Venules" (automatic aspirating syringe).

National Advertising Campaigns.—Cannon Rubber Manufacturers, Ltd., Ashley Road, London, N. are mailing 16,000 chemists advising them that they have booked large spaces in the "Daily Mirror," "Radio Times" and other national newspapers to advertise their Modern teats. The public will be invited to write for a booklet, "Advice on modern bottle-feeding." Forthcoming advertising campaigns are announced by Richard Hudson Ltd., Power Road, London, N.4, for their T. Flowers face powder (featuring "top-tone skin control") and by the manufacturers of Elephant human hair nets, 8 Broadwick Street, London, W.1. R. Demuth, Ltd., Farnham, Surrey, are advertising their four new perfumes (Memento, S. Contraband and White Lies) in Women's Journal commencing in March. For the first time they will advertise Frozoclon and Frozolavender in the national Press. Advertising in magazines, newspapers, weeklies and medical journals and by posters is being carried out by Herts Pharmaceuticals, 1 Welwyn Garden City, for their product Nivea cream—New style advertising featuring Hennafoam. Facial Youth is being carried out by K. C. (Essex) Ltd., Cooltan Laboratories, Hampton, Middlesex, in the national daily and Sunday newspapers.

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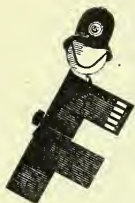
CYTAMEN '50'

(50 micrograms vitamin B₁₂ per cc.)

	Old face price	NEW FACE PRICE
6 x 1 cc.	16/-	9/-
100 x 1 cc.	240/-	discontinued

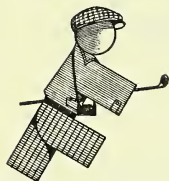
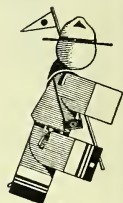
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- Soluble Aspirin.
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Quality and reliability is maintained by
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Suppliers of a complete range of Pills, Tablets, Capsules, Lozenges and Suppositories.

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'DISTAQUAINE'

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preparations of procaine penicillin offer the following advantages :

Aqueous, containing neither oil nor wax

Easy to prepare and administer

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Dry syringe unnecessary

Equipment easily cleaned after use

DISTAQUAINE' SUSPENSION, vials of 10 ml. (300,000 i.u. per m.l.)

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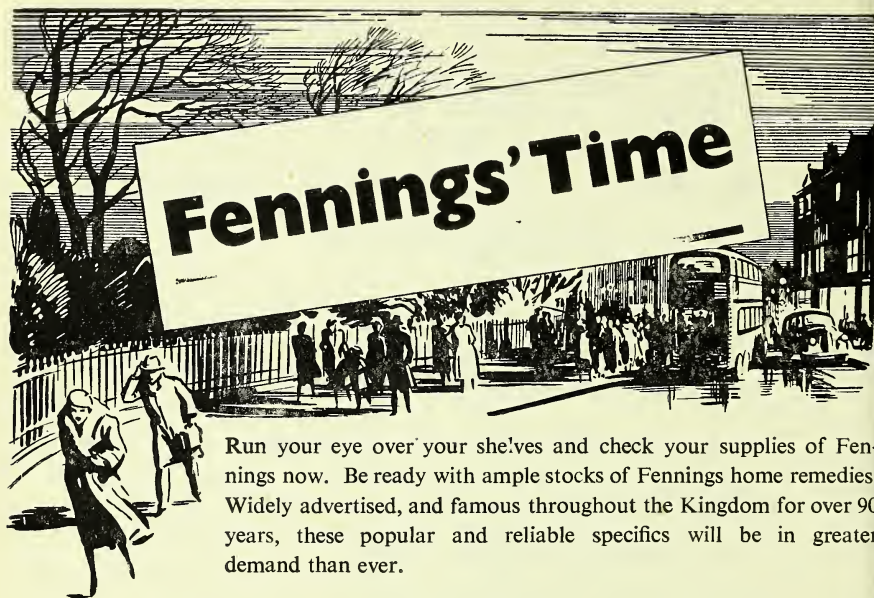
PHARMACEUTICAL SPECIALITIES (MAY & BAKER) LTD.

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Run your eye over your shelves and check your supplies of Fennings now. Be ready with ample stocks of Fennings home remedies. Widely advertised, and famous throughout the Kingdom for over 90 years, these popular and reliable specifics will be in greater demand than ever.

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To combat 'Flu.
Retails at 1/6 per bottle.

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For Coughs, Colds, Bronchitis, etc.
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"SANTULLE"

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DISPENSING

PENICILLIN

TRADE PRICE

10 pieces per tin .. 2/6 tin

PARAFFIN GAUZE

5 pieces per tin .. 1/3 tin

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Individually wrapped

pieces .. 5/4 per doz

SULPHATHIAZOLE 5%.

5 pieces per tin .. 1/8 tin

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Cuxson Gerrard & Co. Ltd.
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Sure DEATH to Slugs & Snails

NEW

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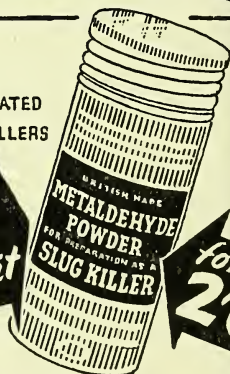
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FOR PREPARATION AS A

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HIGHLY CONCENTRATED
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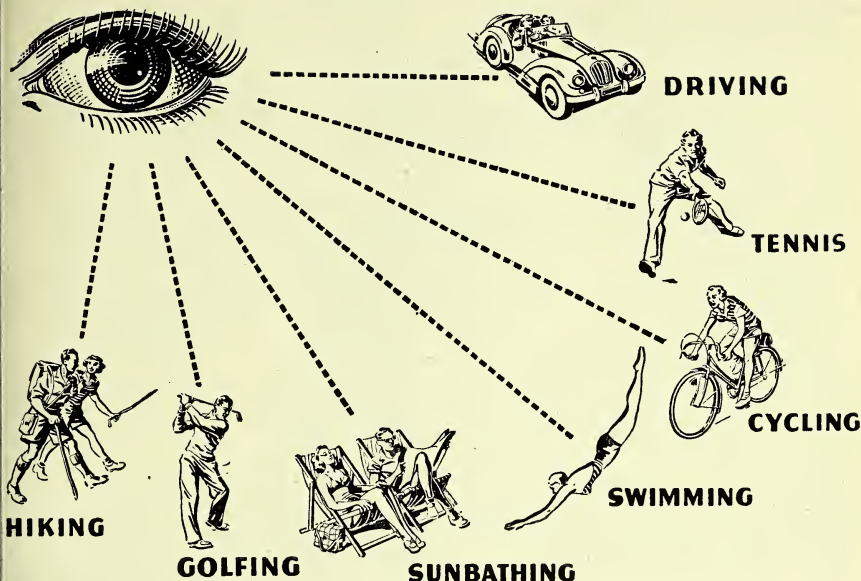
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Summer Days are near again!

Sunshine and crowds, sport, motoring and holidays mean *peak demand for eye-soothing Optrex!* Now is the time to order your summer stocks of Optrex Lotion, Optrex (best-of-all) Eyebaths, and Optrex Eye Compresses. Strong, national advertising will again be hard at work pulling in the customers. Order *now*—for record sales this year!

Stock up now!

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Eyebath, anatomically
designed to fit the eye,
—and fits the bottle
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Brand

RECONSTRUCTIVE TONIC

Vitamin B₁, Glycerophosphates and Strychnine in a palatable base. An ethical Tonic, reconstructive and stimulant, which is recommended for adults and adolescents.

Indicated in Neurasthenia, Neuritis and nervous debility

Bottles of 4 fl. ozs. and 8 fl. ozs. each in carton

Dose, 1 to 2 fl. drachms

Larger sizes also available for dispensing

C. J. HEWLETT & SON LTD.
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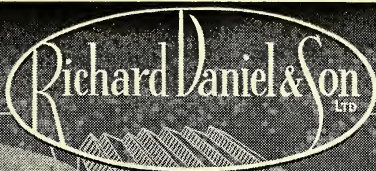
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AQUA STERILE SOLUTION

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**Wandsworth Hospital Group
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**One tablet to be taken
at night**

**tablets should be kept
out of the reach of
children**

**WARD:
PENICILLIN**

DOSE: 1,000 UNITS PER MIL

**MILS. BY INTRAMUSCULAR
INJECTION.**

STORE BELOW 50° FAHR.

USE BEFORE: 1/15

THE MOUTH WASH

GLYCER. THYMOL. CO.

**CC.
PENICILLIN INJECTION B.P.**

60,000 units per c.c.

**FOR INTRAMUSCULAR INJECTION
CONTAINS A BACTERIOSTATIC**

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STERILE BOTTLE

NAME:

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**MEMORIAL HOSPITAL
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THE TEA spoonful to

One TEA spoonful to

taken three times a day

THOMAS WAIDE & SONS LTD., LEEDS

GRAND **display bonus** FOR AN
ESTABLISHED QUICK-SELLING LINE

Ribena VITAMIN C **BLACKCURRANT JUICE**

Despite war-time priorities and restrictions, RIBENA sales have multiplied 16 times in 8 years. Now, RIBENA is available in a new pack with a new, deep-drawn, pilfer-proof top. A vigorous national advertising campaign is in operation and display material is available on request. To help you increase your sales of this fast-growing line we now make this grand *Display Bonus* offer. Cash in with RIBENA!

**DIRECT
6 DOZEN
MINIMUM**

Plus Bonus of 1 bottle per dozen free in exchange for 14 days Window Display.
30/3d. per dozen net—30 days.

**DIRECT
12 DOZEN
TO 120 DOZ.**

Plus Bonus of 1 bottle per dozen free in exchange for 14 days Window Display. (Bonus on orders in multiples of 6 doz. only).
28/3d. per dozen net—30 days.

**DIRECT
120 DOZEN
& UPWARDS**

Plus Bonus of 1 bottle per dozen free in exchange for 14 days Window Display. (Bonus on orders in multiples of 6 doz. only).
27/- per dozen net
30 days.

Packed 1 dozen bottles per carton.
(Bonus packed half-dozen bottles per carton).
Cartons and bottles non-returnable.

Ribena contains not less than 20 mgms. of Vitamin C per fluid oz.

H. W. CARTER & CO. LTD • THE ROYAL FOREST FACTORY • COLEFORD • GLOS.
TELEPHONE: COLEFORD 3201





Anne French
displays
are
profitable

prominent displays of
Anne French cleansing milk are a
sure way to *bigger business!*

Make the most of this attractive display piece on your counter and in your window and get bigger profits from this nationally advertised line

don't forget

Anne French qualifies for the full I.C.C. co-operation discounts showing you 41.6% on best terms.

Choose your £10 and £5 parcels from these products:

'Anadin,' 'Anne French,' 'BiSoDol,' 'Bisurated Magnesia,' 'Freezone,' 'Kolynos Preparations,' 'Lystone Salts,' 'Pineato,' 'Reudel Bath Salts.'

Look at these figures!

Your selling price	...	£13 6 8
Your outlay £10, less 12½%		£8 15 0
Your minimum profit	...	£4 11 8

INTERNATIONAL CHEMICAL CO. LTD.

CHENIES STREET, LONDON, W.C.1



MOTHER AND BABY LINES YOU MUST HAVE



One of your most important customers—the mother. She requires much from the pharmacy; she draws upon a wide range of sundries—and she depends on you to have them. You should stock these good quality lines—

ACCOUCHEMENT SHEETS

Gamgee, 32" × 32" - Doz. 56/3

RUBBER SHEETING

White and red;
nine qualities From 3/- to 8/6 yd

SILCOT MATERNITY TOWELS

Doz.

White absorbent cotton wool;
stitched loops; soft covers 44/4

BREAST RELIEVERS 54/-

NIPPLE SHIELDS

Complete, boxed - - - 8/-

Dimples
Trade Mark

FEEDING BOTTLES and Anti-Colic TEATS

	1 doz.	3 doz.	6 doz.	One and three holes
Double-ended 8 oz.	12/-	11/9	11/6	1 doz. 6 doz. Grs.
Double-ended 4 oz.	10/-	9/9	9/6	2/8 2/7 30/-
No. 1 Upright 8 oz.	8/3	8/-	7/9	
No. 1 Upright 4 oz.	7/9	7/6	7/6	

DIMPLES Feeding Bottles and Teats attractively cartoned

FEEDING BOTTLE

BRUSHES Doz.

White tufted - - - 4/11
Black ordinary - - - 3/11

BATH THERMOMETERS Doz.

In Jap case - - - 40/-

BABY BRUSHES Doz.

Coloured - - - 39/6

Also:—MINIATURE FEEDERS, SOOTHERS, TEETHING RINGS, SAFETY PINS, Etc.

All Goods carriage paid in free packages. Prompt attention given to urgent post orders

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'SULPHAMEZATHINE'

SULPHADIMIDINE

Trade Mark

SODIUM SOLUTION 16%



**for the
control of
COCCIDIOSIS
in chicks**

Four table-spoonfuls of 'Sulphamezathine' 16% solution should be added to every gallon of drinking water at once if cocci-diosis is suspected.

'Sulphamezathine' Sodium Solution 16%
Containers of 4 and 20 fluid ounces.

'Sulphamezathine' Sodium Solution Tablets 1.25 grammes
Containers of 25, 100, 1,000.

IMPERIAL CHEMICAL (PHARMACEUTICALS) LTD.

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WILMSLOW

MANCHESTER



Ph. 202



THE IMPORTANCE OF A Name

Made with a skill born of generations of specialisation in the production of Medicated Pastilles, MEGGEZONES are deservedly Britain's most popular preparation of their type for the relief of coughs, colds and catarrh. National advertising is helping to make the brand name "MEGGEZONES" of still greater value to pharmacists throughout the kingdom.



Send it *to* **COX**

The knowledge and long experience of the COX ORGANISATION, and the technique of their experts are freely available to those who contemplate production of PRIVATE FORMULÆ.

Our manufactures are not limited to TABLETS and PILLS; we produce innumerable Pharmaceutical preparations.

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Cold-pressed

ALMOND OIL

This pure oil, expressed at our Wharf Road works without the use of heat, is quite the finest oil produced, and has long been a StaffAllens speciality



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TAS/AL.269

CALCIUM GLUCONATE
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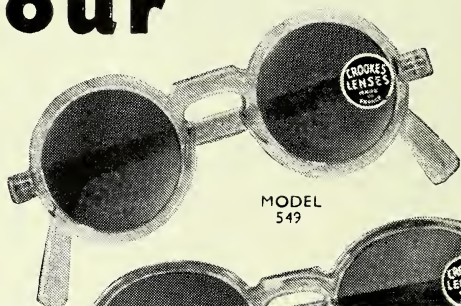
Est. 1870

Kemball, Bishop
& Company Limited

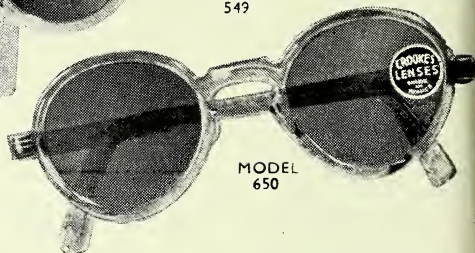
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MODEL
549



MODEL
650

TWO QUICK SELLING STYLES !

549. Round shape with Crookes Lenses. Retail Price 1/9

650. Drop eye shape, with Crookes Lenses. Retail Price 2/-

Sun Glasses NOW

Chemists up and down the country know from experience that there's nothing to touch Bartlett's sun glasses for quick sales and good profits. Styles and colours to suit every requirement at retail prices from 8d. to 2 guineas.

But don't delay. You know what's happening to supplies everywhere just now, and delayed action may mean loss of profits this year. Order now and make sure. Send today for illustrated folder of Bartlett's Sun Glasses, the most complete assortment ever offered to the Trade. Write to:

*and make
sure they're*
BARTLETT'S
the best sellers

ALFRED FRANKS & BARTLETT CO. LTD.

AUDREY HOUSE, ELY PLACE, LONDON, E.C.1.

ORDERS SHOULD BE PLACED THROUGH YOUR WHOLESALE HOUSE
WHOLESALE ENQUIRIES TO THE ABOVE ADDRESS

MEET

Pliofilm

THE NEW TRANSPARENT PACKAGING MATERIAL WITH EVERY PROTECTIVE QUALITY YOU CAN POSSIBLY ASK FOR

Think of it! No more spoilage by excess moisture or dryness. No more loss through evaporation, leaky packages, or contaminating impurities. That's the promise of Pliofilm, the brilliant, new transparent packaging material which is destined to play a big part in your future business. Already Pliofilm is guaranteeing *full quality protection* to an extensive range of pharmaceutical products.

Pliofilm is air-proof and damp-proof. It protects by sealing wanted moisture *IN*, as in the case of sulphonamide tulle dressings, and un-

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Pliofilm, by itself and printed in gay colours, makes an attractive, tempting display package. It is also used as a protective lining for paper or foil. One way or the other you will be seeing more of Pliofilm, the most practical packaging material in use today.

Only PLIOFILM has all these Practical Qualities:

● FULLY PROTECTIVE

PROOF AGAINST AIR, MOISTURE, AND LIQUID
—SEALS **IN** WANTED MOISTURE, FLAVOUR
AROMA, POTENCY—SEALS **OUT** ALL
CONTAMINATION

BODD THINGS ARE BETTER

IN

★

Pliofilm by GOODYEAR

★ Trace mark of the Goodyear Tire and Rubber Co.

● THOROUGHLY HYGIENIC

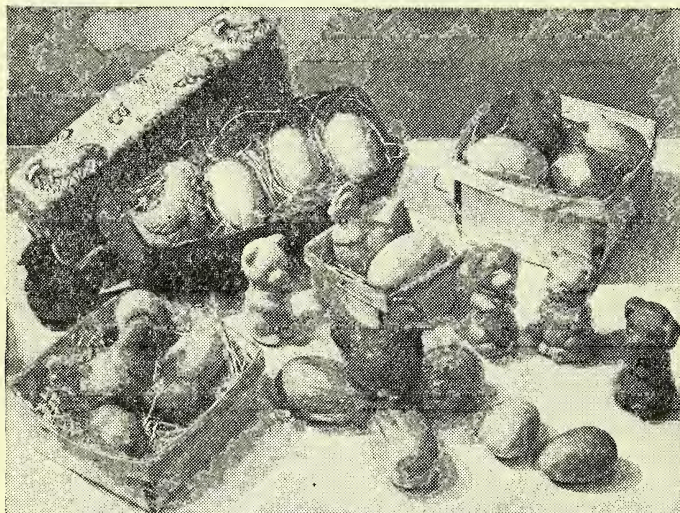
● TRANSPARENT WITH SPARKLING
SALES APPEAL

● RESISTANT TO PUNCTURES
TEARS AND ABRASIONS

● DURABLE, NON-INFLAMMABLE,
ODOURLESS, TASTELESS

SEND YOUR ENQUIRIES TO PLIOFILM (C.D.I.), GOODYEAR TYKE & RUBBER CO., WOLVERHAMPTON

Our Pets Soaps — FARMYARD SERIES



*Finest quality
Toilet Soap*

**Immediate
delivery**

*Wholesale
enquiries invited*

**Simmonds Soap
Makers**

Sole Distributors: ROTHMAN MANCHES LTD., 52 Ormside Street, London, S.E.15

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DIATRIN REGD.

A new antihistaminic of low toxicity and few side-effects.

Diatrin is being introduced to the medical profession by regular full page announcements in the B.M.J., Lancet, The Practitioner and other important medical journals; by regular circularization to all doctors in practice in the U.K.; by direct representation to the doctors by medical representatives.

 * **PACKAGING:** Sugar-coated oral tablets, *
 * 50 mg. each. Bottles of 20 and 250. *
 * **DOSAGE:** In the average case, one tablet, *
 * 50 mg., by mouth 4 times a day, preferably after *
 * meals and at bedtime (total intake, 200 mg.). *
 * *

	20's	250's
* Price to consumer	4/- each	disp. only
* Trade Price ..	32/- per doz.	320/- per doz.

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Diatrin is a P.I, S.I, S.IV, poison, not subject to purchase tax.

Supplies obtainable from your wholesaler or direct from :—

William R. WARNER and Co., Ltd., Power Road, London W. 4.

When women believe— they BUY!

Every day letters like these arrive, proving the ever-rising appeal of BRISTOW'S LANOLIN SHAMPOO. Bouquets for Bristow's mean sales for you. Show it, recommend it — and be ready for the constant demand.

LIVERPOOL

Dear Sirs,
I feel I must write and let you know how pleased I am with the results of your Lanolin Shampoo. It really does all you claim for it. My little girl has a head of lovely natural curls, but it never looked lovelier than lately after one tube of your Shampoo — the shine and the silkiness are constantly remarked upon.
Yours faithfully,
(Sgd.) MRS. H. B.

WIGAN

Dear Sirs,
I am writing to compliment you on producing such a wonderful shampoo as Bristow's Lanolin Shampoo. It really lives up to what the advertisements claim to be, and I find that the Lanolin ingredient is especially good in correcting dryness. I have found your shampoo exceptionally good before doing Home Permanents, as the hair is left silky and supple, just right to take and hold a perm.
Yours sincerely,
(Sgd.) MISS J. H.

NOTTINGHAM

Dear Sirs,
I would like to tell you how much I enjoy using your Bristow's Lanolin Hair Shampoo. My hair was dry and brittle but your shampoo has improved it greatly. My daughter (aged 17) uses it too — and is delighted with the results. We both recommend Bristow's Lanolin Shampoo to our respective friends, having great confidence in it ourselves.
Yours faithfully,
(Sgd.) MRS. D. R.

Bristow's



LANOLIN SHAMPOO

*it's the
LANOLIN
that sells it!*

HANDY TUBE: 8/10 a dozen plus purchase **STANDARD TUBE:** 14/2 a dozen plus purchase
tax at 33½% to retail at 1/3. tax at 33½% to retail at 2/-.

T. F. BRISTOW & CO. LTD., OLD BOND STREET, LONDON, ENGLAND

T.38

Keep them skipping fit Mother!



EDME
"Autumn Sun"
 EXTRACT OF MALT
 WITH COD LIVER OIL
The finest protection for chills and ills

Have you seen

THIS

new beautifully designed
 showcard size 23" x 17½" in
 full colours?

With the two side panels 17" x 10½" each also supplied, the whole makes an attractive window display that compels attention, and creates sales.

THE COMPLETE SET IS FREE. Ask our representative, or write to us for your FREE set.

EDME "AUTUMN SUN" is the Malt and Oil with the "taking flavour."

For prices and further particulars write to:—

EDME LIMITED

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Phone: Regent 5563-4

KEEN ROBINSON & COMPANY LIMITED

wish to advise the trade
 that as from 12th March
 the consumer prices of their

ROBINSON'S 'PATENT' BARLEY

will be increased as follows

1 lb. tin . . . 2/6d.

½ lb. tin . . . 1/4d.

SUPPLIES HAVE BEEN MADE
 AVAILABLE during recent weeks to
 leading users through our Continental
 associates of many lines including
 the following:

PARANITRANILINE
 PARAPHENETIDINE
 PARANITROCHLOROBENZENE
 BETANAPHTOL
 METHYLCYCLOHEXANONE
 THIURAM
 PHENYLBETANAPHTHYLAMINE
 Etc., Etc.

MAY WE ALSO ASSIST YOU

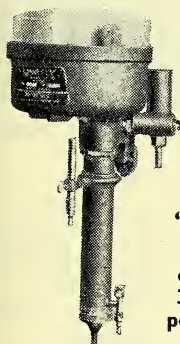
THE PROPANE COMPANY LTD
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Telephone: GROsvenor 5301 (5 lines)
 Telegrams: PROPANCO PICCY, LONDON

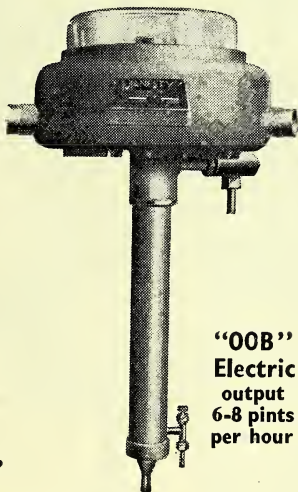
AUTOMATIC WATER STILLS

MANESTY
BRITISH MADE

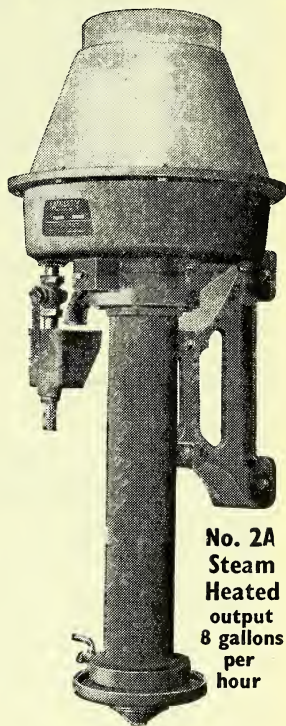
- CONTINUOUS IN OPERATION
- HIGH QUALITY DISTILLED WATER
- LOW COST OF OPERATION
- EASILY CLEANED



"OB"
Gas
output
3 pints
per hour



"OOB"
Electric
output
6-8 pints
per hour



No. 2A
Steam
Heated
output
8 gallons
per hour



STAND E6
OLYMPIA

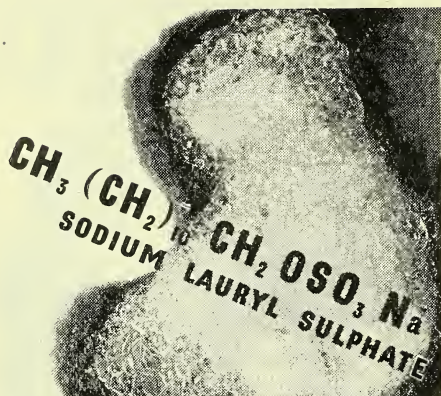
FULL DETAILS GLADLY SUPPLIED

MANESTY MACHINES LTD.

DEPT. 5, SPEKE, LIVERPOOL 19

Telephone : HUNTS CROSS 1972

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EMPICOL L.Z. POWDER

Chemical Nature Sodium Lauryl Sulphate.

Active Matter and Composition 90% Sodium Alkyl Sulphate. Free Fatty Alcohol—not more than 2%. Water not more than 3%. Inorganic Salts—not more than 8%.

Appearance Spray dried white powder.

Packing Waterproof paper-lined hessian bags or fibre board drums.

Bulk Density Between 0.1 and 0.3 as required.

Properties and Uses The purest Sodium Lauryl Sulphate available. Used as a foaming agent and detergent for cosmetics and toilet articles, particularly for Toothpastes. It is available in standard and B.P. 1948 (Sodii et Laurylis Sulphas) grades. Many industrial users who require a high purity Wetting Agent, Emulsifier, etc., are finding Empicol L.Z. Powder economical and effective for specialised purposes.



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Telegrams: Marchonpro, Rand, London

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1 Booth Street, Manchester, 2

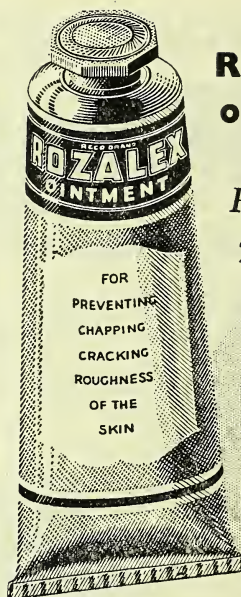
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N. IRELAND SALES OFFICE:

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Telephone: Belfast 26798



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OINTMENT**

*Retailing at
2/6 per tube
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*Obtainable
from your
usual
wholesale*

TRADE DISCOUNT

33 1/3 %

ROZALEX LTD., 10 NORFOLK STREET, MANCHESTER

When it's Sundries Think of "Ritchies"

A few samples from our range:

Arch Supports	Gillettes
Hypodermic Needles (Stainless)	Personna
Dressings of all types	Dunlopillo
	Cushions
Weighing Machines	Electric Blankets
Ramer Sponges	Heat-Pads
Spontex Sponges	"Agrippa" Teats
Pill Boxes	Feedrites
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FOR HOME & EXPORT
SPECIALLY PACKED

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Grams: Horehound, Phone, London.

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Grams: Horehound, Manchester

62 ORBISTON STREET, MOTHERWELL

Phone: MOTHERWELL 1413

Grams: Horehound, Motherwell

Agents in Northern Ireland:

HAROLD MITCHELL & Co. Ltd., 321 Grosvenor Rd., BELFAST. Tel. 24356

Increased potency . . .

Price change . . .

*Vitamins Limited
announce that their
preparation*

VITAVEL SYRUP

*has been
revised as shown.*

NEW FORMULA

One teaspoonful (3.5 c.c.) contains:—

VITAMIN A	...	...	...	...	2,500 i.u.
VITAMIN D	...	...	...	...	375 i.u.
VITAMIN B ₁	...	...	...	...	0.5 mg.
VITAMIN C	...	...	...	...	10.0 mg.

NEW PRICES

The new range of packs and prices is as follows:—

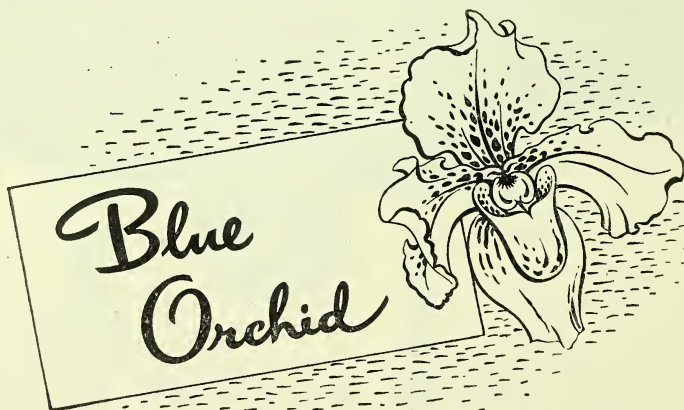
	Retail	Chemists	Wholesale
6 FLUID OUNCE	3/9 each	50/- doz.	26/3 doz.
40 FLUID OUNCE	24/- each	16/- each	14/- each

The 80 fl. oz. size is withdrawn and the 40 fl. oz. introduced.

All V.L. specialities are prescribable under the N.H.S. The cost is in no case greater than the official preparation; in some cases, it is either less or there is no official equivalent.



VITAMINS LTD., UPPER MALL, LONDON, W.6



BLUE ORCHID PERFUME, TOILET AND BEAUTY PREPARATIONS

Have you received details of the attractive terms given by Delavelle for the Spring Window Display Bonus Offer of Blue Orchid

Products? If not, write at once for details of the offer of these nationally advertised lines on special terms.

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Orders to: 38/46 Orsmann Road, London, N.1.

A **WINNER**
FOR YOUR
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WINDOW!



Keep them on

'KEPLER'
TRADE MARK

The FOOD that keeps them fit



A BURROUGHS WELLCOME & CO. PRODUCT



Set a spur to winter sales by giving 'Kepler' a prominent display. Let the lively Kepler' showcard work for you as "silent salesman." Forceful advertisements for Kepler' are currently appearing in the "Radio Times" and other favourite family magazines with a readership of over 30 million. By linking up with this publicity campaign you can be sure of securing a satisfactory share of the profitable 'Kepler' market.

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BRAND

COD LIVER OIL WITH MALT EXTRACT



BURROUGHS WELLCOME & CO. (The Wellcome Foundation Ltd.) LONDON

Safe protection!
VAPEX
 INHALER
 AGAINST COLDS



recharged with
VAPEX

1/6

Made in England by THOMAS KERFOOT & CO. LTD., VALE OF BARDSLEY, LANCASHIRE

**SIMPLIFIED
 SELLING**
 of the

**VAPEX
 INHALER**

with this attractive
Hanging Display Card

Find it hanging room
 and the card will do
 the rest.

THOMAS KERFOOT & CO. LTD.
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V291

Dr. J. Collis Browne's Chlorodyne
 and
The Pharmacy and Poisons Act, 1933

Dr. J. Collis Browne's
CHLORODYNE

SALE RESTRICTED TO REGISTERED CHEMISTS

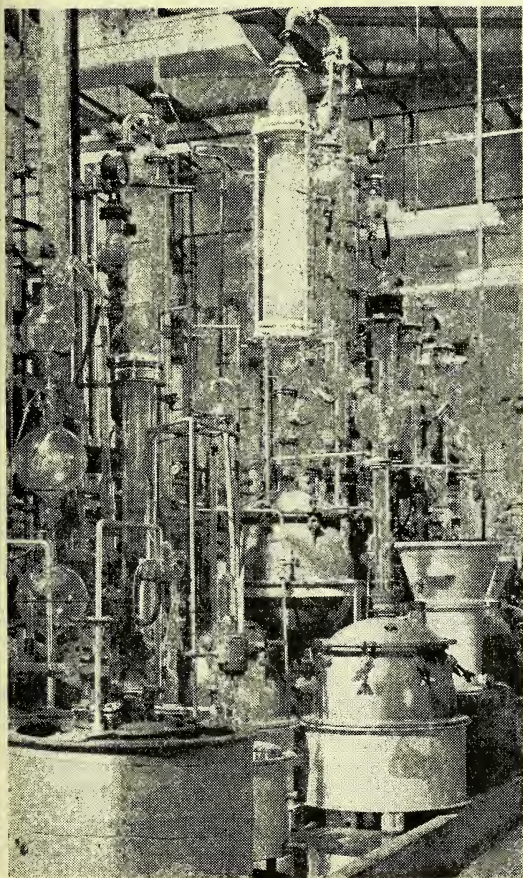
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P.A.T.A.

Sole Proprietors:

J. T. DAVENPORT LTD.
 UNION ST., LONDON, S.E.1

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The range of B.D.H. production includes all the sex hormone preparations of the B.P. 1948 and N.F. 1949.

ANDROGENS

Testosterone Propionate B.D.H.

Methyl-Testosterone B.D.H.

PROGESTOGENS

Progestin B.D.H.

Ethisterone B.D.H.

ŒSTROGENS

'Oestroform'

Œstradiol Monobenzoate B.P.

Œstrone B.P.

Ethinyl Œstradiol B.D.H.

'Estigyn'

Dienæstrol B.D.H.

Stilbæstrol B.D.H.

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GONADOTROPHINS

'Gonan'

'Serogan'

Plant in a B.D.H. laboratory devoted to the preparation of sex hormones.

Descriptive literature will be forwarded to pharmacists on request.

THE BRITISH DRUG HOUSES LTD. LONDON N.1

AEH/T/9

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(BRAND OF THEOPHYLLINE-ETHYLENEDIAMINE)

VASODILATOR · RESPIRATORY STIMULANT · DIURETIC

Cardophylin is the registered name of a brand of Theophylline-Ethylenediamine in the form of tablets, ampoules and suppositories.

A Whiffen product

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a crime

by ACT OF PARLIAMENT



The Prevention of damage by Pests Act, 1949
applying to Rats and Mice is now in operation

RODINE KILLS

Norway (or Brown) Rat	<i>Rattus norvegicus</i>
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all species of Rats and Mice!

YOU ARE WISE TO RECOMMEND

RODINE

P.A.T.A.

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T. HARLEY LTD. · PERTH · SCOTLAND

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**ALLOBARBITONE, BARBITONE, SODIUM BARBITONE, BUTO-
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Specialists
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SODIUM SALICYLATE B.P.

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QUATERNARY AMMONIUM COMPOUNDS *Now available commercially*

LEDA CHEMICALS LTD.

are pleased to announce that they are now manufacturing the following quaternary ammonium compounds in commercial quantities:—

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These compounds, hitherto only available commercially from America, are not being marketed by us under trademarks, but are intended as raw materials for pharmaceutical and cosmetic houses interested in using them in their formulations. In addition to the above range we are quite prepared to examine the possibility of manufacturing any other specific quaternary required, based on the higher Alkyl Chlorides.

ALSO AVAILABLE: HIGHER ALKYL CHLORIDES, broad and narrow cuts from C₈-C₁₈. Data sheets and full information gladly supplied on request.

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HYDROGEN PEROXIDE

Benzoyl Peroxide, Calcium Peroxide

Magnesium Peroxide, Zinc Peroxide

Urea Hydrogen Peroxide

Sodium Perborate

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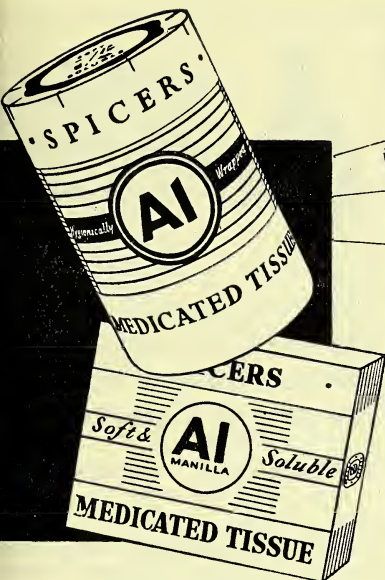
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FAMOUS HEALTH TEA FROM SOUTH AMERICA
Wonderfully sustaining and nourishing. Can be boiled or brewed, or mixed with ordinary tea
Numerous unsolicited testimonials received for it
Packed in 1lb. packets. Retail at 1/9
Trial order of 1 dozen sent post paid for 16/-
BATLEY & CO., Upper Brook St., Stockport

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LOWER BROUGHTON, MANCHESTER

Thank their customers for their patience and forbearance during these difficult times, and assure them that every effort is being made to supply quickly lines which they have previously purchased.

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EASTCHEAP, LONDON, E.C.3

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IN BULK-LOOSE TO WHOLESALERS AND PACKERS

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Needle Crystals, Medium, Exsiccated

All grades conform to the 1948 B.P. Standard

Special Crystals matched and any degree of exsiccation
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GALE'S NUTRITIOUS TONIC

MORELIX

(Regd.)

ESPECIALLY SUITABLE FOR
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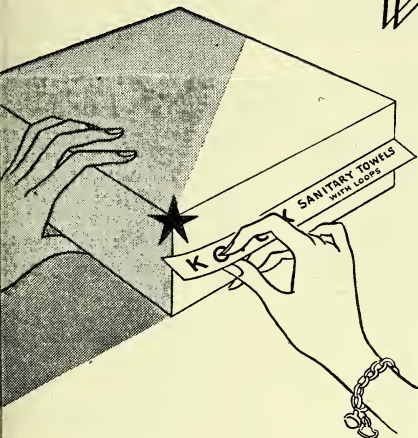
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BRAND

GALE, BAISS & CO. LTD.,
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Women prefer

KOTEX

SANITARY TOWELS

(WITH LOOPS)

Because demand exceeds supply,
please do not blame your whole-
saler should he be unable to
meet your requirements.

★ *Simply remove the perforated strip and
the plain box is ready for sale.*

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F. SCHUTZE & Co., LTD.
ESTABLISHED 1882
for "MASTER" BRAND SURGICAL TRUSSES
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PERFUMERY BOTTLE WICKERERS in RAFFIA
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N23



Victory V

GUMS & LOZENGES

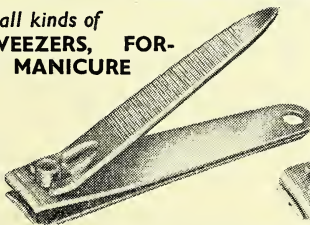
FRYER & CO. (Nelson) Ltd., NELSON, LANCs.

SURGICAL AND MANICURE SPECIALITIES LTD.

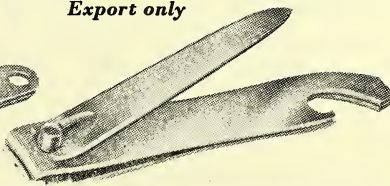
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Manufacturers of all kinds of
**SCISSORS, TWEEZERS, FOR-
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NAIL CLIPPERS
Carbon Steel—
Chromium Plated.
Lever action,
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*Wholesale and
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Constant and Steady SUPPORT for your SALES



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Made by ASPRO LTD.,

Slough,

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ASPRO

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ASPRO

DISPLAYS BRING IN NEW BUSINESS

NORVEX TOWELS

We regret having to advise an increase in the prices of all our Towels in common with other manufacturers.

Our prices for our—

"POPULAR" QUALITY

which is an All Wool Towel are as follows:—

- No. 0 2/2
- No. 1 2/6
- No. 2 3/1
- No. 3 3/10
- No. 4 4/6

*Silky Soft Knitted Covers with
Stitched Loops*

SEND YOUR ORDERS TO—

CROSSKILL'S OF NORWICH

"SURCO"

RELIABLE

ELASTIC HOSIERY

SEAMED AND SEAMLESS

SURGICAL BELTS

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Over 50 years' service of
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*For
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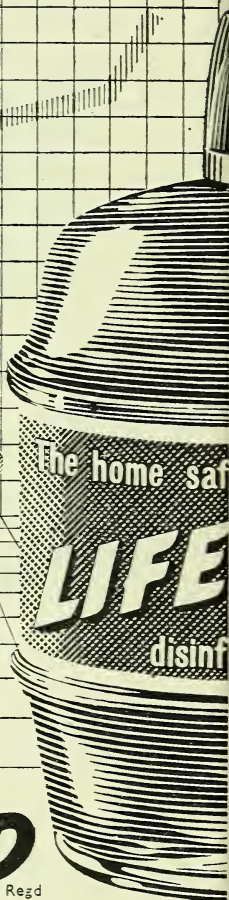
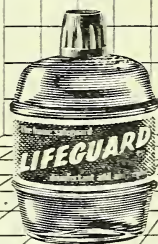
EUGENOL B.P.C.

METHYL SALICYLATE B.P.

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Your
Disinfectant
Sales
go

UP and UP



if you
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LIFEGUARD

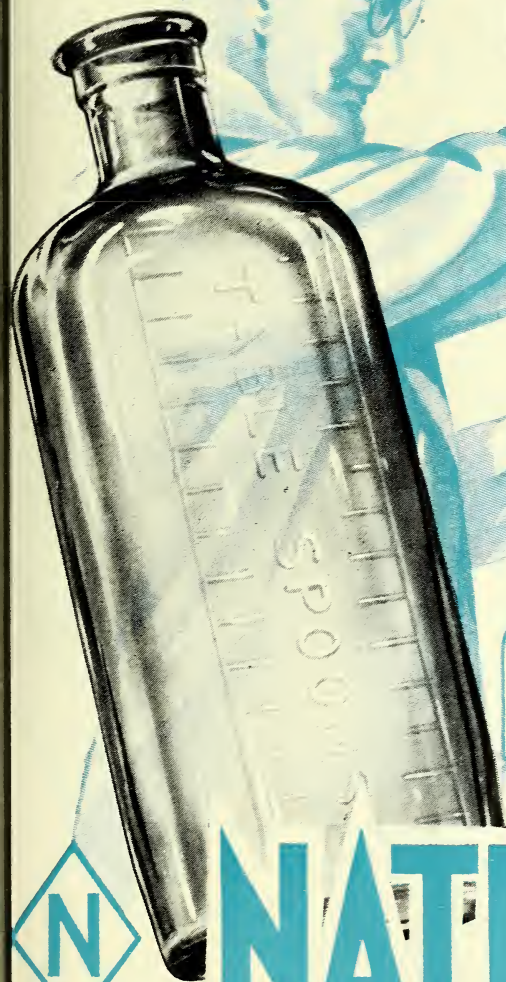
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Quite one of the biggest advertisers in the disinfectant field is LIFEGUARD. All the year round, LIFEGUARD leads in forceful, sales-making advertising. LIFEGUARD is a great seller with 101 new uses.

LIFEGUARD PRODUCTS LIMITED · LIFEGUARD HOUSE · E.C.4

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Medical and Pharmaceutical BOTTLES



WHOLESALE ONLY



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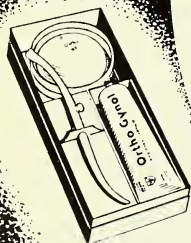
Fishergate, YORK
Telephone: York 3021

501 Hatton Garden, London, E.C.1
Telephone: Holborn 2146

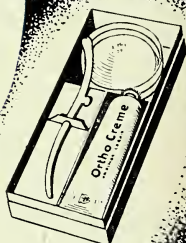
Ortho

*the
ethical
name
in
contraceptives*

These original developments of Ortho research are consistently before the medical profession and teaching hospitals. They are the most widely prescribed of their kind. The clinical need is established and the demand justifies their prominence in your pharmacy.



Ortho-Gynol Set
(Sizes 55-95)



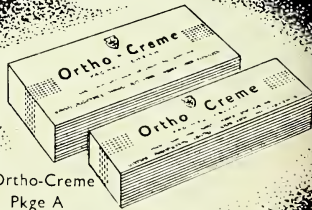
Ortho-Creme Set
(Sizes 55-95)



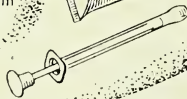
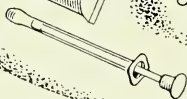
Ortho-Gynol
Pkge A
(with applicator)
Ortho-Gynol
Pkge B (tube only)



Ortho Diaphragm
(Sizes 55-95)



Ortho-Creme
Pkge A
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through
your usual
wholesaler

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HIGH WYCOMBE · BUCKS · ENGLAND

FOR HOME & EXPORT

META AMINO PHENOL 99/100%

PAS ACID

PAS SODIUM

PAS CALCIUM

In Bulk and Tablet forms

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EPHEDRINE HYDROCHLORIDE

SULPHONE D.D.S.

MERCURY SALTS

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★ We can
supply these and
many other
drugs
advantageously.

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Order now from your wholesaler
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GLADSTONE LABORATORIES

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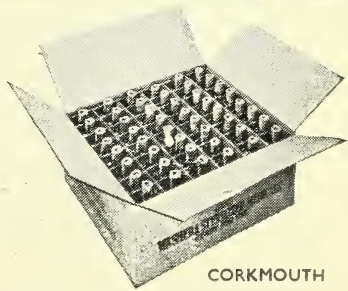


*The
Complete Service*

**WASHED AND
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READY FOR USE**



FITTED
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MOULDED OR
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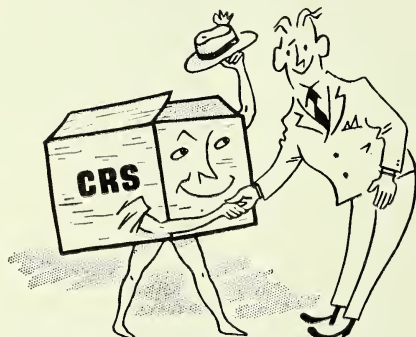
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**UNITED GLASS BOTTLE
MANUFACTURERS LTD.**

8 LEICESTER STREET, W.C.2

Tel.: GERRARD 611 (18 Lines) Grams: UNGLABOMAN LESQUARE, LONDON



We wish those Containers Many Happy Returns

We really do welcome back your containers.

They can be used again.

It is a grand help to the deliveries of further supplies.

Look after your C.R.S containers and you will be helping to close the dollar gap.

**CONTAINER RECOVERY HELPS
NATIONAL RECOVERY**

Container Recovery Service

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it's time to stock up



with

Goodall's WATERGLASS

EGG PRESERVATIVE

You can sell Goodall's Waterglass with confidence, knowing full well that it is a first-class product, well-advertised, absolutely reliable in use. It gives a clear and clean fluid and keeps eggs in good condition for approximately two years. With greater supplies of eggs in the shops during the peak months, poultry-keepers will be preserving more of their egg harvest for winter use. This means that you can expect more requests for Goodall's Waterglass, so keep plenty in stock. Tins are completely leakproof so you can store with safety.

No. 1 Size preserves 80/100 eggs.

No. 3 Size preserves 320/400 eggs.

No. 2 Size preserves 160/200 eggs.

No. 4 Size preserves 560/700 eggs.

GOODALL, BACKHOUSE & CO. LTD., SOVEREIGN STREET, LEEDS



NOT ONLY

*Beautiful*IT'S THE MOST PRACTICAL
ROLL MILL EVER DESIGNED**MILLMASTER**

Not only does the MILLMASTER add to the appearance of every Laboratory and Factory but what is so much more to the point it is far ahead of any similar sized mill in the world. This self-compensating, hydraulically controlled triple roll mill is the answer when looking for real super efficiency allied with speed.

Send today for full details of this and other Boyd-Norman machines.

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Different liquids present different problems and when it comes to mixing, an efficient solution lies in the use of a Mitchell mixing unit. From a wide range we can supply models that will agitate anything from 1 gallon to 50,000 gallons. Increase output and lower operating costs by installing a Mitchell mixer.

MITCHELL

**RAPID MIXING &
STIRRING UNITS**

L. A. MITCHELL LIMITED
37 PETER STREET · MANCHESTER 2

RB MX36

THE **FLUID**

AGITATOR-EMULSIFIER LABORATORY MODEL SL-A

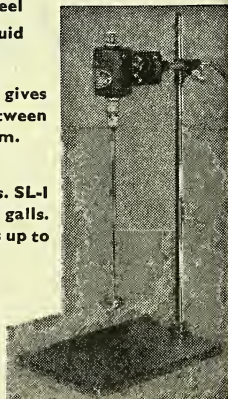
All Stainless Steel

Contact with Fluid

Built-in Control gives
speed variation between
20 and 2000 r.p.m.

Also larger models. SL-1
for vessels up to 5 galls.
and S.C. for vessels up to
500 galls.

IMMEDIATE
DELIVERY



FLUID EQUIPMENT CO. LTD.
(Dept. S.D.) 83 Seafie'd Road, London, N.11
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PRESENTING TWO LEADING LINES OF THE POPULAR 'ACME' RANGE



in
assorted
colours

RETAIL prices:

- 1 pt. large cup - 5/3
- 1 pt. small cup - 4/11
- 2 pt. large cup - 9/11

JUG SET

Retail 16/-

JUG only

Retail 12/6



ACME VACUUM FLASK CO.
PHOENIX WORKS, BRIDGEND, GLAM.

75 beautiful SUNGLASS STYLES for 1951

Let us help you to solve your
sunglass problems for the coming
season by sending you details of the
comprehensive range of beautiful
sunglasses we have available, in all
shapes, sizes, colours, and materials
to suit all pockets. Write now to . . .

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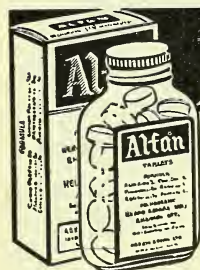
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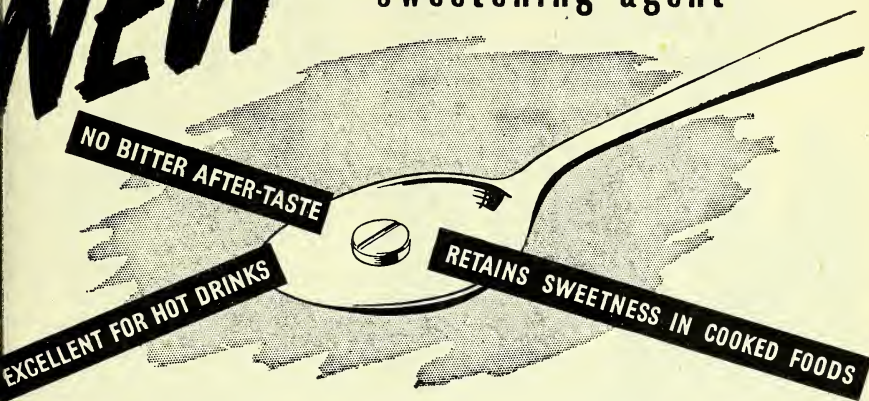
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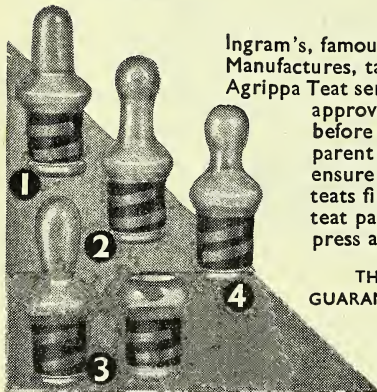


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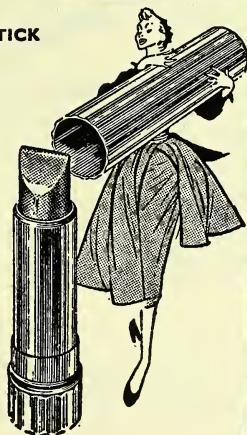
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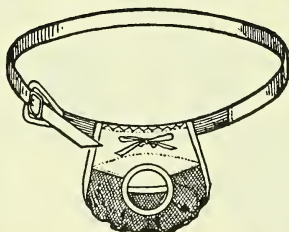
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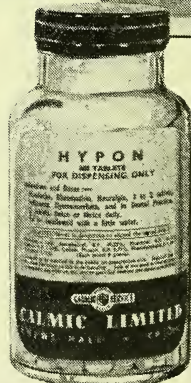
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